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and Petroleum Industry
MAY 42

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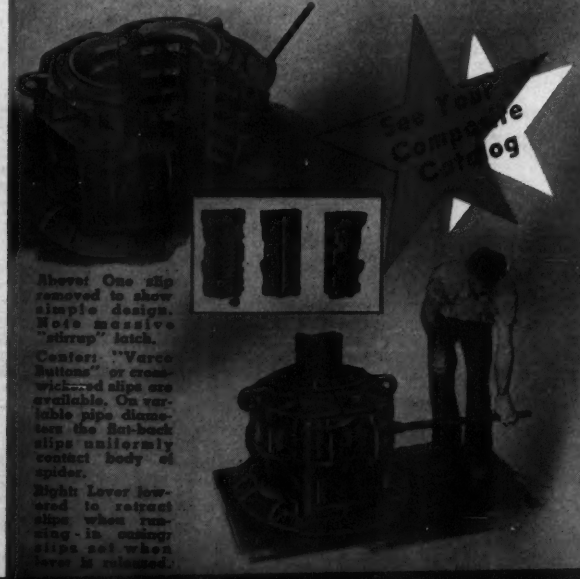

Above: One slip removed to show simple design. Note massive "stirrup" latch.

Center: "Varco Buttons" or cross-wickered slips are available. On variable pipe diameters the flat-back slips uniformly contact body of spider.

Right: Lever lowered to retract slips when running-in casing; slips set when lever is released.

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Vol. 35
No. 8
Whole
No. 1607

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IN THIS ISSUE

Unitized and Intrafield Allocation Studies to Extend Life of Oil Fields.. 4

Effect of the Oct. 21, 1941 Earthquake in Dominguez Oil Field 14

Laugh This Off 20

Los Angeles Basin Development 21

San Joaquin Valley Development 24

Coastal District Development 27

Joint Annual Meeting of Petroleum Geologists 28

Business Directory 30

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April 23, 1942

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Unitization and Intrafield Allocation Studies

Will Extend Life of Oil Field

Paloma, California's most important condensate oil field, is now "all set" to become a major contributor to the national war effort. Final approval for the unitized operation of the 1765 acres of proven area held by Ohio Oil Co., Western Gulf Oil Co., and The Texas Co., has been given by the landowners. As this is written the operators are examining bids returned by contractors for the construction of an absorption type cycling plant. Project priority for the Paloma operation program, which will involve a large expenditure, has been requested from the Federal Government, and early favorable action is anticipated.

On this and succeeding pages appear pictures taken at the meeting of California Oilmen in Los Angeles, April 17, when D. R. Knowlton, director of production for the Petroleum Coordinator's office (Washington, D. C.), warned the industry of the exceedingly precarious position of steel supplies for the industry.

Because little or no delay in receiving the necessary priority approval is expected, the operators are moving ahead rapidly with the plans for the huge cycling plant which ultimately will handle 100,000,000 cubic feet of Paloma gas per day to produce isobutane for the manufacture of fighting grade aviation gasoline (100 octane), normal butane for the manufacture of butyl rubber, while a substantial percentage of the 40° API condensate oil bottoms fraction taken from the first stabilizer unit of the plant is estimated to be suitable as blending stock for the production of aviation gasoline. This straightrun cut is reported to have an octane number of 90.

These figures are far from purely theoretical. For more than a year the operators have investigated not only the "retrograde condensation" phenomenon characterizing the production in Paloma (a study which was imperative if the field were to be saved from premature death), but also the composition of the condensate and its amenability to processing. For some time a large scale pilot plant has been in operation in the field and the data derived from this source have permitted the operators to proceed with confidence in the formulation of a detailed operating program for the 1765-acre unitized area.

Engineers in charge of the cycling plant project estimate that the plant construction work will be completed approximately two months after favorable action is taken on the priority request. Present plans call for a system of nine input or injection wells, and for 16 vent or output wells for the 1765 acres in the unitized holdings. Stripped gas from the absorption type cycling plant will be injected into the nine input wells at a surface pressure of 4200 pounds per square inch, a surface pressure estimated to be adequate for maintaining optimum pressure in the producing formation.

For the benefit of readers who may not be aware of that eccentricity of condensate production fields known as "retrograde condensation," a drop in formation pressure below a certain critical minimum, known as the dew point pressure will result in the release of liquid in the formation most of which can never be recovered. Bottom hole pressure in Paloma's eight wells already completed is about 4700 pounds per square inch at 10,100 ft. Experi-

At left, D. R. Knowlton is telling the California oil men that M-68 was the alternative to complete moratorium on drilling. Below, left to right, E. E. Pyles, Dist. 5 production chairman; A. L. Weil, retiring Dist. 5 general chairman; Mr. Knowlton, and Charles T. Reichert, Dist. 5 chief of materials and supplies.

"Them's grim words, Mr. Knowlton, but you can count on us all the way," say these California oil operators as they hear of sacrifices in other producing and refining areas of the country.

mentation has determined that a pressure not much below this figure must be maintained in order to prevent serious condensation in the pay formation.

To this 1765-acre unitized area may soon be added another 400 acres. This possibility hinges upon the result of General Petroleum Corp.'s request for priority approval on its projected further drilling on its Gallagher well in Section 33, slightly west of north of the Paloma discovery well. Operators who drill outside of the present 1765-acre unitized portion of Paloma field may enter into the unitized program if they obtain production in the formation affected by the cycling operation.

Coalinga Nose Unitization

Urged to prolong flowing life of the field and increase ultimate recovery, Coalinga Nose oil field is being carefully studied by operators of interest to determine if prompt action should be taken to conserve the oil's principal propulsive agent, dissolved gas, and whether steps should be taken to arrest the growth of a gas cap forming in the field.

By the close of 1941 it was discovered that lowering pressures in the Gatchell pay formation had caused large volumes of dissolved gas to leave the oil and migrate to the crestal area where, if produced, would not contribute all of its effective energy as a recovery agent. Loss of nearly 230 pounds in the field datum pressure in the production of some thirteen million barrels

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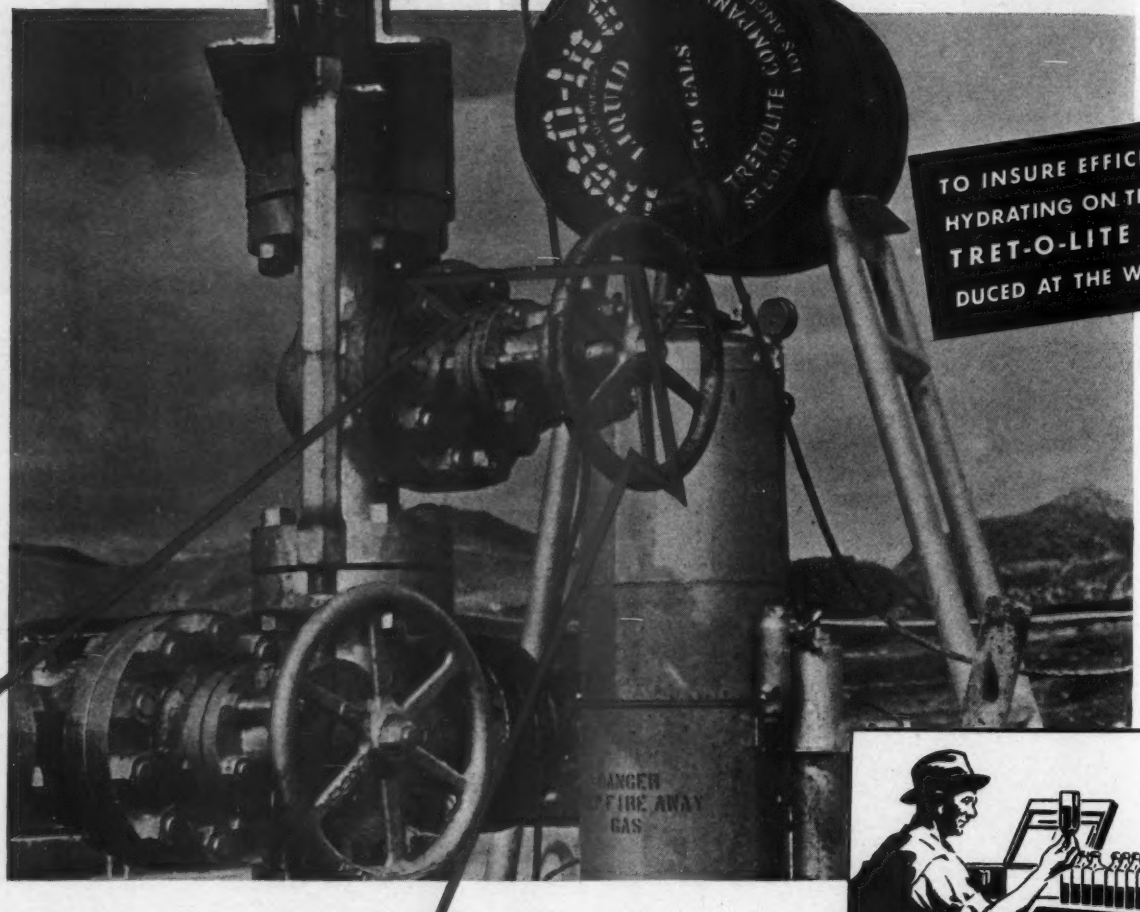
of oil, coupled with a lagging water drive, indicates that the liberation of dissolved gas from the oil already represents a serious loss of otherwise recoverable oil, and that this trend will probably continue, unless steps are taken in the near future to apply artificial pressure maintenance in the Gatchell formation.

Most operators in Coalinga Nose oil field have not only taken cognizance of this threat to ultimate maximum recovery for the field, but have appointed an engineering committee to study the problem with a view of recommending proper procedure for exploiting the field under present conditions of availability of materials. Members of this committee are: E. B. Armstrong and F. M. Cole, Honolulu Oil Corp.; L. F. Kohle, Robert S. Lytle, Operator; J. E. Gosline, Standard Oil Co. of California; L. R. Rogers, Superior Oil Co.; W. L. Jarvis, The Texas Co., and L. S. Chambers, Seaboard Oil Co.

This committee has found that continued liberation of dissolved gas at current rates will effect a serious avoidable loss in ultimate recovery from the field, and has recommended the application of a pressure maintenance program. The carrying out of such a program must now be harmonious with the war effort. Such a program, as in the case of the Paloma condensate field, would require unitized operation of the various diversely held leases which would be affected.

Coalinga Nose field is believed to cover an area of some 3000 acres if the northern limit is taken as the Structural Saddle between the Coa-

on Guard!



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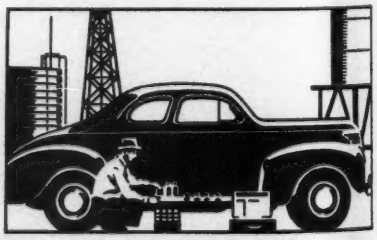

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Representatives in All Principal Fields

Well, here's a brief spot of relaxation as the period for asking questions from the floor begins.

linga Nose and Coalinga Northeast fields in Sec. 31-19S-16E. The pay sand (Gatchell) is estimated at nearly 1,100,000 acre-feet.

Because of the high permeability of much of the Gatchell in this field, equalization of pressures is rapid and effective over an unusually wide area. This means that gas is going out of solution practically throughout the reservoir making the loss in propulsive energy felt by all operators in the field.

However, as in most California fields, there are anomalies which at first glance considerably complicate the problem. Without going into matters more appropriate for a purely technical treatment, it may be pointed out that the Gatchell sand is far from uniform both as to position and permeability. For instance gas oil ratios near the easterly limit of the field have decreased on an average of two to four times as much as gas oil ratios in the central part of the field, while in the south end gas oil ratios have remained practically unchanged. At the structurally high wells on the west edge, however, the sharply increasing gas oil ratios point definitely to the formation of a gas cap in this part of the field.

The most important, and seemingly insurmountable, obstacle to a unitized pressure maintenance program for Coalinga Nose oil field is the lack of an adequate supply of gas for injection into the Gatchell sand in order to keep formation pressure from dropping. However, injection of gas currently being produced would retard substantially the pressure drop now being evidenced. The practicability of supplementing the injected gas with water injection is being studied. At this time it is estimated that use of water alone for pressure maintenance would require a daily injection of about 24,000 bbls. to maintain pressure.

It is reported that most of the engineering committee are in favor of unitization as a prerequisite to a pressure maintenance program for Coalinga Nose. It is not known what methods have been proposed for the division of equities within the field.

N.E. Coalinga's Gas Cap Problem

Unlike Paloma or Coalinga Nose, the problem in Northeast Coalinga oil field is not unitization, but intrafield allocations designed to minimize trouble from the gas cap area. The first remedial step in the Northeast Coalinga situation was taken by Standard Oil of California, Union Oil Co. of California; Superior Oil Co., and Amerada Petroleum Corp., when they purchased the two Webb-Jones wells (Nos. 46 and 48) from Bandini Petroleum Co. and shut them in. It is reported that 432,000 barrels of oil were given for these two "gas cap producers."

The interested operators early took cognizance of the threat offered by gas cap production wells and recommended the evolution of a schedule of intrafield allocations which would minimize this threat. The engineering committee appointed to study this problem in Northeast Coalinga oil field is made up of the following: J. E. Gosline, Standard Oil Co. of California; N. C. Nickles, Wilshire-Bandini; H. T. Olsen, Superior Oil Co.; W. L. Jarvis, The Texas Co.; H. C. Pyle, Union Oil Co. of California; Downs McCloskey, Amerada Petroleum Corp.

This group has recommended that wells be produced from the black oil zone at minimum gas oil ratios practicable, and that all gas cap wells be shut in. Four factors are to be considered in making intrafield allocations, if all operators approve the recommendations of this engineering committee. These are: 1. Wells; 2. Acre feet of gas cap sand; 3. Acre feet of oil sand, and 4. Proximity of oil sand to edge water.

As a basis for initial application of these factors to allocation of the pool quota among the several wells in the field, the weighting agreed upon is as follows: (a) Fifty per cent of the pool quota is to be allocated to the number of wells considering that each well in the field has an equal allotment earning value and that the average well in the field will earn the field quota divided by the producing number of wells times 50 per cent of the pool quota. (b) Each acre foot of gas cap sand is to be weighted by a factor of 2/10. (c) Each acre foot of oil sand which lies directly below the gas cap is to be given a weighting of 8/10. (d) Oil sand which does not lie directly below the gas cap, i.e., oil sand in close proximity to edge

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water, is to be given a weighting of 1.

The acre feet of sand weighted in accordance with this method will furnish the basis for allocation among the various leases of the remaining 50 per cent of the pool quota. Any well in the field not capable of producing its allotment will be given an allotment equal to its maximum ability to produce and the remainder of its allotment will be redistributed among other wells in the field.

Total well allotments on each lease arrived in accordance with the above shall be redistributed among the lowest gas oil ratio wells on such lease so that as great uniformity in production may be obtained as may be feasible, and such that as great a degree of line wells offsetting production parity is maintained as may be possible. The engineering committee which devolved this plan recommends that the weighting given all factors shall be subject to revaluation from time to time by the engineering group so that the weighting may be altered to accommodate the indicated changes in the physical conditions which obtain in the field as the result of production. The committee points out that the proposal to distribute the oil among wells in accordance with the principle of taking the oil from the lowest gas/oil ratio wells springs from the desire of the operators in this field to maintain the existing energy in the gas cap for the purpose of enhancing oil recovery and lowering lifting costs.

Intra Field Allocation in North Belridge Field

Another prolific oil field threatened by loss of gas energy is North Belridge. Here another committee of engineers and operators found that North Belridge's Wagonwheel pool is threatened with greater costs and less oil recovery unless prompt steps were taken to conserve formation pressure. The committee's study considered acre footage of oil sand, acre footage of gas sand, formation volumes, pressure, temperature, porosity, productivity analyses, original volumes in place by properties, and volumes produced by properties. The committee concludes that the corrective measure is to reduce the gas output and overall gas-oil ratios to some practicable minimum, and thereafter to investigate the details of exploitation with the object of determining how a pressure conservation program may be most effectively applied.

As a result of tests made over periods of as long as four months, the committee came to the following conclusions: 1. The restriction of gas output is the outstanding necessity to promote maximum oil recovery. 2. An intrafield allocation which shuts in excessively high gas/oil ratio wells must be carefully worked out so as not to conflict with fundamental property rights of operators. 3. Allocation which recognized said rights is an insufficient remedy for the excessive gas withdrawals, but serves the best purpose pending further cooperative effort. 4. The allocation formula should be limited to one objective, i.e., the reduction of the gas/oil ratio of Wagonwheel pool oil production.

On this basis the committee recommended: 1. That the allocation of oil be continued on the basis of the formula used for March allocation, except that the basis for average gas/oil ratio shall be based upon data for the second month prior to the scheduled month. 2. That the rates for individual wells be set so that for each operator the selection will be according to the formula:

$$A = \Sigma r_1 + r_2 + r_3 \ldots . \Bigg] \text{ So that } \frac{\Sigma g_1 + g_2 + g_3 \ldots .}{A} = \text{a minimum.}$$

Where A = Operators allocation of oil in barrels daily
r_1 etc. = rate of barrels daily, for specific wells of operator
g_1 etc. = rate, m.c.f. daily for respective wells

On the basis of these calculations the percentage of total production from the Wagonwheel pool for each of the participating companies is as follows: Belridge Oil Co., 69.22 per cent; Tide Water Associated Oil Co., 14.58 per cent; Continental Oil Co., 6.076 per cent; Richfield Oil Corp., 3.468 per cent; The Texas Co., 3.307 per cent; Union Oil Co. of California, 2.452 per cent; Standard Oil Co. of California, 0.898 per cent.

Paloma History

During 1938, antedating by nearly a year the discovery of the Paloma field, Ohio Oil Co. drilled KCL No. A-8 for Stevens zone production near the south quarter corner of sec. 32, 31-26. Bottomed at 11,186 ft. after finding heavy oil sand believed the Stevens zone equivalent, the hole was cased with heavy 7 in. pipe to 11,147 ft. and a series of gun perforated trials instituted. Recovery in all intervals consisted only of mud and water with mere traces of oil, a condition now believed attributable to the fact that the sands, known to be extremely tight from subsequent Paloma field drilling, become too impermeable to produce at this point. In either event the sands are known to exist at the northwest flank of the present field.

Continuing the geophysical work which prompted the original try, Western Gulf Oil Co. and The Texas Co. located a structure to their liking southeast of the deep well and blocked up extensive acreage over the subsurface picture.

The discovery well, KCL No. A-54-3, was located near the center of sec. 3,32-26 and finished August 31st, 1939, flowing clean 50.6 gravity condensate from 178 ft. of Stevens zone sand above bottom at 10,175 ft. Given only a 5 hour flow trial because of limited storage the well proved capable of more than 2250 bbls. of oil and 15,000,000 cu. ft. of gas through a 24/64 in. bean.

Thus Western Gulf Oil Co. and The Texas Co. became co-discoverers of the Paloma field, presently proved to embrace more than 3000 proved acres and to contain more than a million acre feet of sand.

Since the original well was bottomed in silty oil sand the co-discoverers moved a quarter of a mile easterly to drill A-74-3 for a look at the lower section of the Stevens. Drilled, cored and tested at length to a final 11,216 ft. the lower Stevens zone sand phases were discarded and the well finished in the main zone just above 10,287 ft. flowing 40 bbls. per hour and 6,750,000 cu. ft. of gas through a 48/64 in. bean. Controlled production in this well was 217 bbl. of clean 53.8 gravity oil and 1,454,000 cu. ft. of gas through an 11/64 in. orifice under 3000 lbs. tubing and 3300 lbs. casing pressure.

At the same time Ohio Oil Co., holder of the nearest adjacent acreage, drilled KCL B-2, 43-3 in the northwest quarter of the discovery section 3. Top of the Stevens oil sand here was found at 10,001 ft. and the well was finished at 10,145 ft. flowing 1900 bbls. of clean 51.2 gravity oil and 12,340,000 cu. ft. of gas through a 33/64 in. bean.

Subsequent development within the field has resulted in 9 completions along a four mile northwesterly axis with the latest completions at exact opposite ends of the trend.

At the northwest tip, near the the north quarter corner of sec. 4, 32-26, Ohio Oil Co. recently finished KCL No. A-10, 41-4 in slightly blacker oil sand at 10,241 ft. with the top of the saturation found at 10,005 ft. Completed under wraps the well flowed 156 bbls. of 41.0 gravity oil cutting 11.0% through a 12/64 in. bean. Also indicating relief from the high pressure gas cap found in the center of the field, the gas from this flow measured only 800,000 cu. ft. and the pressure dropped to 950/1350 lbs.

At the southeast tip of the present productive line Western Gulf and Texaco completed Symons No. 12-7 near the northwest corner of sec. 7, 32-27 after an exhaustive testing program to 11,811 ft. Spudded in August 1941 the well was placed on limited production only this month.

in other words

by JOHN CLINTON

I'm handy around the house. I can fix the refrigerator so that it takes a service man only half a day to repair the damage. I do handy electric wiring that often lasts until the fire department arrives.

* * *

But whenever I raise the hood of the Hispano-Plymouth, I sort of give up! I know there are a million mysterious things under there that are probably wearing out or needing adjustment. But me... I can't tell which!

* * *

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* * *

And even though they use factory specifications, 9 different lubricants, and a whole bench full of special tools, the big thing to *me* is—they check all the mysterious things that worry me—fan belts, battery cables and terminals, spark plugs, wheel bearings, and that sort of thing.

* * *

So, give up your nail biting and worrying over car maintenance and let the Union Minute Men give your car Stop-Wear Lubrication, too. For the Minute Men give you "Expert Care To Save Car Wear."

Obviously very low on structure, test located the top of the condensate type sand at 10,939 ft., light oil sand at 11,270 ft. and heavier but unpromising sands from 11,275 ft. to 11,547 ft. bottoming in shale at 11,811 ft.

Unstinting production efforts in the many sand phases offered for trial in the deep hole resulted only in plugging to 10,997 ft. where the project was finished in the interval 10,935 to 10,985 ft. flowing 44 bbls. of clean 50 gravity oil and 457,000 cu ft. of gas through a 26-64 in. bean. Results at this flank would indicate that the southeasterly limits of the the field are clearly defined.

Only one dry hole has thus far been drilled in the field area since the inception of recent development, that being Union Oil Co.'s Morgan No. 81-14 more than a mile south of production on the southwesterly flank of the present northwesterly trend.

Located in the northeast corner of sec. 14,32-26, the Morgan well was abandoned at 11,456 ft. after encountering the Stevens sand at 10,654 ft. and finding a few streaks of oil sand at 10,825 ft. Cored ahead, the well encountered various bodies of grey sand with additional oil sand fingers found only at 11,055 and 11,090 ft.

It is indicated that the unproductive limits at least have defined along the southwest flank of the geographically large field.

The long contemplated northeasterly extension drilling may become currently active when the unitization plan is in operation and the riches of this field may be utilized without waste. There is, however, a great reservoir of proved acreage available for future drilling when the need arises without moving another inch into the unexplored areas. Certainly this is another of the great petroleum reserves of California.

N. Belridge History

Although the North Belridge field has been developed in a conservative and unspectacular manner by a total of only eight operators, its history is none the less quite interesting. Shallow zone production was first obtained in the years 1912 to 1915, but as yields were low, little development took place until 15 years later when the Temblor zones were discovered near the 5000 ft. level. In October of 1930 the field came into real importance with the completion of Belridge Oil Co.'s No. 15 at 5475 ft. flowing 2887 bbls. a day of high gravity condensate and an estimated 50,000,000 cu. ft. of gas. The limits of Temblor production were well defined within two years and in 1932, Belridge Oil Co. carried down its No. 64 in sec. 27,27s-20e as a deep test to discover a new zone at 7470 ft. believed at the time to be the equivalent of a sandstone outcropping on Wagonwheel Mountain. The name "Wagonwheel" now appears to be a misnomer, but has ever since been generally used although many attempts have been made to term the upper section "Bloemer Zone" after the well which first produced it and the lower portion "Belridge Zone". Not wishing to develop the new deep zone at the time, Belridge Oil Co. shut in No. 64 after it had flowed only six days. Last production gauged 2040 bbls. a day of 50 gravity oil and 75,000,000 cu. ft. of gas.

Meanwhile Ohio Oil Co. had failed to find the Temblor sands productive in Bloemer No. 1 on the easterly flank of the field and had suspended drilling at 5986 ft. With the new deep zone in mind, Ohio reentered the old hole in August of 1932 and deepened to 8525 ft. finding the top of the oil horizon at 8415 ft. Completed in March 1933, Bloemer No. 1 established a potential of 700 bbls. of 34.6 gravity oil and 800,000 cu. ft. of gas per day. Following Ohio's success, Union Oil Co. drilled No. 18 half a mile to the south and obtained a initial of 5300 bbls. and 11,000,000 cu. ft. of gas.

For about three years, Wagonwheel development was confined to the southeasterly portion of the field with only offsets being drilled. In April of 1936, however, Reward Oil Co. decided to have a look at the deep sand in the west central section and accordingly began deepening its No. 5 in sec. 34 which had been a failure in the Temblor sands. Although the dips on the west flank were found much steeper than expected, the well topped the Upper Wagonwheel at 8375 ft. and completed flowing 1800 bbls. daily of 30 gravity clean oil.

The next great step in the deep development occurred when The Texas Co. deepened its Temblor Zone failure, J. D. Martin No. 1, on the north plunge of the axis in sec. 22. The Upper Wagonwheel was encountered at 8045 ft. but was too tight to produce so the well was carried to 8446 ft. where it was brought in flowing 1150 bbls. a day from the Lower Wagonwheel. This completion forced an offsetting campaign which resulted in the drilling of more than 20 wells within a short space of time.

No further pioneering was done until the year 1941 when Belridge Oil Co. drilled its No. 55 in sec. 26 to 10,800 ft. in search of deeper production. Very little information was released on this well but it is believed that Eocene was topped at about 9550 ft. and that the bottom of the hole is in Cretaceous. A string of 6⅝ in. casing was cemented at 9400 ft. and a production test made with the hole open to 9771 ft. which resulted in a strong flow of salt water with only traces of oil and gas reported. The hole was subsequently plugged to 8180 ft. and the well finished in the Wagonwheel zones. Located in a high structural position, the well is believed to have made an adequate test although there is some possibility of enough shifting of the axis with depth to place it on a flank of the long narrow fold.

With the probability of deeper production ruled out by the Belridge Oil Co. deep try, operators in recent months have been looking at their hole cards which in this case are electric logs. Logs of wells in the extreme northwest section of the field all showed a promising horizon approximately 400 ft. above the Wagonwheel which had produced

considerable gas and a small quantity of oil between casing strings in Tide Water Associated Oil Co.'s No. 1 in the southeast corner of sec. 21. A formation test of the interval in Richfield Oil Corp.'s Belridge No. 2 to the east, however, had recovered only fresh water to discourage further trials.

In November of last year, Belridge Oil Co. while drilling No. 24 near the W¼ cor. of NW¼ of sec. 27, gun-perforated casing at intervals from 7530 to 7740 ft. and made a test during which the well flowed at a daily rate of 21.9 bbls. of 52 gravity clean oil and 11,000,000 cu. ft. of gas. The well was then completed in the Wagonwheel at 8500 ft. with 5½ in. casing cemented at 8255 ft. and the perforations in the 9 in. casing left open in the upper sand which has come to be known as the "R" Zone. Thus the well produces each sand independently by flowing the "R" Zone through the 9 in. casing around the 5½ in. casing and allowing the Wagonwheel Zones to flow through tubing installed in the 5½ in. In December, Belridge Oil Co. plugged No. 15-28 and perforated between 7831 and 8162 ft. obtaining a flow of 475 bbls. and 20,000,000 cu. ft.

At the present time Belridge Oil Co. is drilling No. 31-R as a westerly outpost in sec. 28 and has encountered the "R" sands near the 8400 ft. level making it considerably lower on structure than the No. 24-27 which is located a quarter of a mile to the northeast and higher on the steeply dipping west flank of the field. The quality of the sand found in No. 31-R-28 has not yet been reported. With the "R" Zone as its objective Tide Water Associated Oil Co. is starting No. 35 near the center of sec. 21. Both of these wells appear to be located beyond the limits of Wagonwheel production and both will go far toward clarifying the "R" Zone picture. Not much is known of the form and character of this newly developed reservoir which so far has only proved good at the northwest end of the field. Development to date indicates the sands to be lenticular and it is not yet possible to predict future limits. The outlying locations of the current drillers were undoubtedly chosen in hopes of finding black oil production with a more favorable gas-oil ratio than the three wells which now produce large quantities of gas with a small output of 50 gravity condensate.

At the present time there are eight shallow zone wells capable of producing a total of 60 bbls.; twelve Temblor wells with a total yield of about 800 bbls.; three "R" Zone wells yielding approximately 250 bbls. and 80 wells in the Wagonwheel which, under curtailment produce about 4200 bbls.

Fred L. Tyler Heads Reed Roller Bit in L. A.

Taken as an indication that a program of expansion, possibly along lines contributing to the national war effort, is underway, is the recent appointment of Fred L. Tyler as Pacific Coast Division

Fred L. Tyler

manager of Reed Roller Bit Co., with headquarters at the company's large plant and machine shops at 1317 Esperanza St., Los Angeles.

A graduate of Colorado School of Mines, class of 1923, Mr. Tyler is by no means a newcomer to California, having attended University of California from 1916 to 1918, when he laid aside his books to join the Army for service in World War 1. After leaving Colorado School of Mines, Mr. Tyler went to Mexico City for Chicago Pneumatic Tool Co., and there he remained for five years. During the following six years he operated as an independent oil man, principally in Texas, and then made his first association with Reed Roller Bit Co., in Houston, Texas. The Illinois oil boom found him representing Reed Roller Bit Co. at the Salem, Illinois, offices, where he remained two years, leaving that post to establish the Reed Roller Bit offices in Tulsa, Okla.

Another important move announced by Reed Roller Bit Co. is in connection with the rapidly growing export business of the company. This was the appointment of Reed O'Neil as special representative to handle the export trade, a choice clearly indicated by Mr. O'Neil's wide and intimate knowledge of the problems involved. Mr. O'Neil's headquarters will be in the Los Angeles offices of the company.

U. S. Steel Sets Production Record

Benjamin F. Fairless, president of United States Steel Corp., announced, April 8, that the subsidiary companies of the corporation in March established all-time records in producing nearly two million tons of blast furnace products and almost two million six hundred thousand tons of steel ingots and castings.

A new record in production of plates, vital to the war effort, was also made by the United States Steel subsidiaries in March when approximately three hundred thousand tons rolled off these mills.

Richgrove Trys Yet Continuing

Two wells are working in the Richgrove-Jasmine-Delano area. Latest to get under way is The Termo Co.'s Salca No. 1 in sec. 1,25-27. Last reported at only 150 ft. under contract by Bender Drlg. Co. the well follows immediately the company's abandonment of Parker No. 1 in section 12. The Parker well bottomed in green sand and shale at 1778 ft. without having encountered the Vedder. Only encouragement was dry, oil stained sand from 1735 to 1745 ft.

The second effort in the area is the Superior Oil Co.'s Core Hole No. 1 in sec. 26,25-27 which was last reported drilling at 1680 ft.

L. A. Basin Earthquake Oct. 21, 1941, Effect in the Dominguez Oil Field[1]

Kenneth M. Bravinder[2]
Compton, California

Introduction

The southwestern part of the Los Angeles Basin was affected by an earthquake at 10:57 P.M. on October 21, 1941. The epicenter of this shock, as located by Beno Gutenberg[3] of the Seismological Laboratory of the Carnegie Institution of Washington, was at a point along the Newport-Inglewood fault zone approximately 3 miles southeast of the center of the Dominguez oil field (Fig. 1).

This shock is of particular geologic interest because the casing in fifteen flowing wells in the western part of the field was damaged to the extent that a 1½-inch dummy pressure bomb would not pass through the inside of the 2½-inch tubing at the point of damage. A tabulation of information concerning the damaged wells is given in Table I.

Acknowledgments

The writer wishes to thank W. S. Eggleston and Carl A. Steiner of the Union Oil Company of California and Dean Sheldon of R. E. Havenstrite, Operator, for their aid and constructive criticism during the preparation of this paper. Thanks are also due Beno Gutenberg of the California Institute of Technology for information concerning the epicenters of the recent earthquakes.

General Geology of Dominguez Oil Field

The Dominguez oil field occupies one of a series of **en echelon** anticlinal folds along the Newport-Inglewood fault zone, one of the most prominent structural features traversing the Los Angeles Basin. At present the field has eight producing zones designated as the First to Eighth Callender zones, respectively, lying between depths of 3,900 feet and 7,500 feet on top of the structure. The upper five zones are within

[1] Published in Bulletin of the American Association of Petroleum Geologists, March 1942.
[2] Union Oil Company of California, Post Office Box 511.
[3] Beno Gutenberg, oral communication.

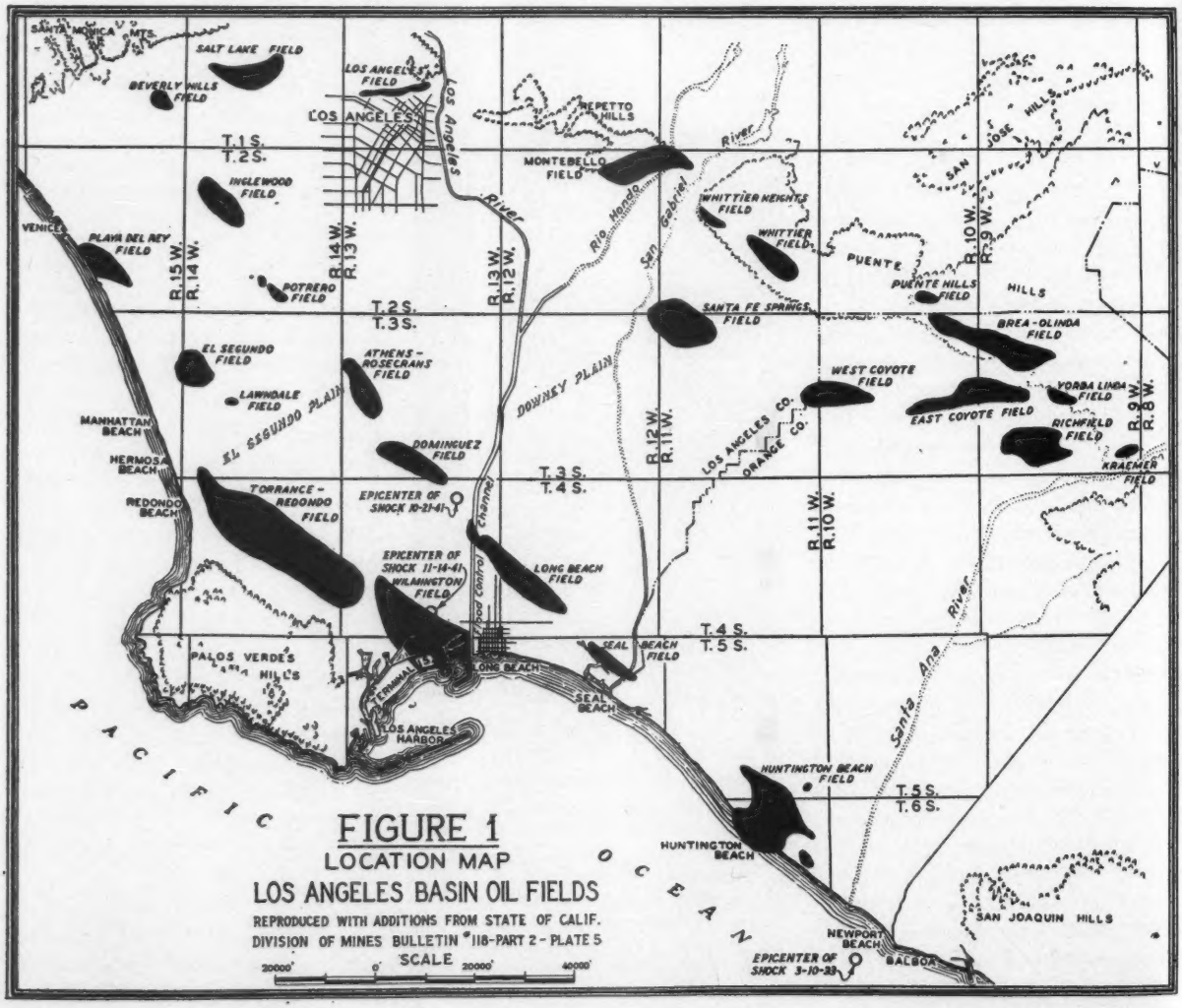


FIGURE 1
LOCATION MAP
LOS ANGELES BASIN OIL FIELDS
REPRODUCED WITH ADDITIONS FROM STATE OF CALIF. DIVISION OF MINES BULLETIN #118-PART 2 - PLATE 5
SCALE 20000' 0 20000' 40000'

the Repetto (Pliocene) formation, the lower three within the Puente (Miocene).

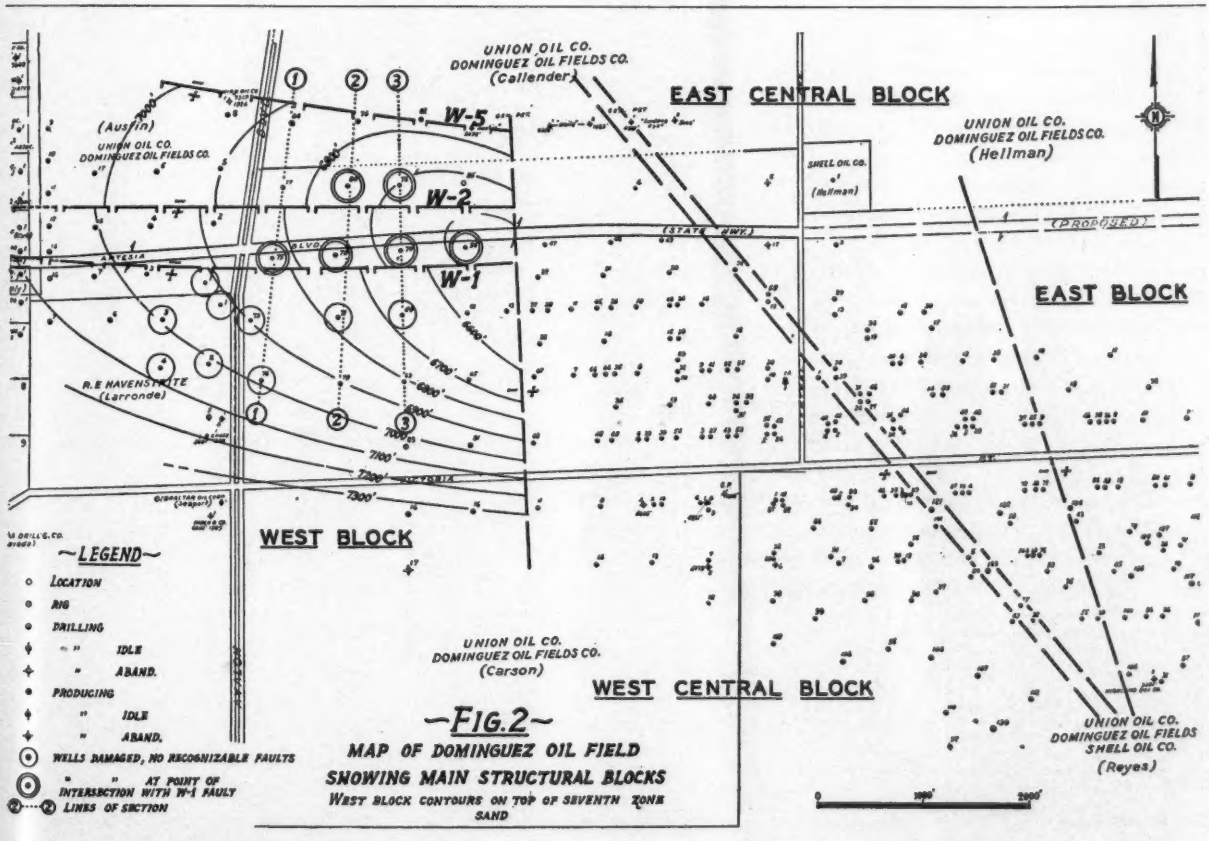
Structurally the field is an anticline modified by two well developed systems of faulting: (1) a series of generally high-angle normal and reverse faults striking oblique to the axial trend and (2) a series of south-dipping reverse faults striking nearly parallel with the axial trend. The faults of the first series divide the field into four main structural blocks (Fig. 2). The members of the second series increase in number and amount of throw with depth, but die out as they are traced upward in the section. Faulting has been important in the control of the accumulation of oil within the structure, particularly in the Miocene zones.

Relation of Area of Damage To Structure

The damaged wells are located in an elliptical area with a trend of N. 60° E., lying in the westerly of the four main structural blocks of the field. On this block only the Sev-

TABLE I.

Well	Elev. (Feet)	Producing Zones	Total Depth (Feet)	Water Shut-Off Casing: Diameter (Inches)	Water Shut-Off Casing: Depth (Feet) Cemented	Tubing Damaged at Depth (Feet)	Intersection of Plane of W-1 Fault as determined from Electric Log (Depth, Feet)	Effect on Well Production
UNION OIL CO. OF CALIF.								
Austin No. 1	42	7 & 8	7,480	7	6,970	5,688	—	None
Callender 56	81	8	9,620					
		Plug—	7,300	9⅝	7,158	6,130	6,160	None
Callender 68	78	7 & 8	7,392	7	6,770	6,684	—	None
Callender 70	74	7 & 8	7,355	7	6,731	6,051	6,070	None
Callender 71	78	7 & 8	7,485	7	6,880	6,739	—	Died
Callender 72	60	7 & 8	7,400	7	6,740	5,320	5,325	Died
Callender 73	62	7 & 8	7,460	7	6,980	6,307	—	Died
Callender 75	45	7 & 8	7,396	7	6,895	5,899	5,900	Died temporarily
Callender 76	64	7 & 8	7,565	7	7,075	6,784	—	None
Callender 78	49	7 & 8	7,375	7	6,830	6,021	6,012	Died
Callender 80	70	7 & 8	7,414	5½ Perf.	7,202	5,385	5,380	Died
R. E. HAVENSTRITE, OPERATOR								
Larronde No. 1	42	7 & 8	7,543					
		Plug—	7,500	7	6,972	6,133	—	Prod. temporarily declined
Larronde 2	50	7 & 8	7,587	7	7,043	6,428	—	Prod. temporarily declined
Larronde 3	31	7 & 8	7,542	7	7,015	5,600	—	Died
Larronde 4	35	7 & 8	7,635	7	7,630	6,236	—	Died



—FIG. 2—

MAP OF DOMINGUEZ OIL FIELD SHOWING MAIN STRUCTURAL BLOCKS

WEST BLOCK CONTOURS ON TOP OF SEVENTH ZONE SAND

enth and Eighth Callender zones are productive. The fifteen damaged wells may be divided into two groups. In a southerly group of nine wells the point of damage occurs at seemingly unrelated depths between 5,600 feet and 6,784 feet. No faults were known to intersect the bore of these wells. In a northerly group of six wells the point of damage occurs between 5,320 feet and 6,130 feet at, or close to, the intersection of the well bore with the plane of a south-dipping reverse fault designated as W-1 in Figure 2 and in Figures 3, 4, and 5. All of the wells in the field intersected by the W-1 fault were damaged by the earthquake. Other wells in the vicinity of those known to be damaged were checked through the tubing and no evidence of damage was found. It is interesting to note that no evidence of damage was found at the point of intersection of faults W-2 and W-5 a short distance north of W-1.

Information Obtained During Progress of Well Repair

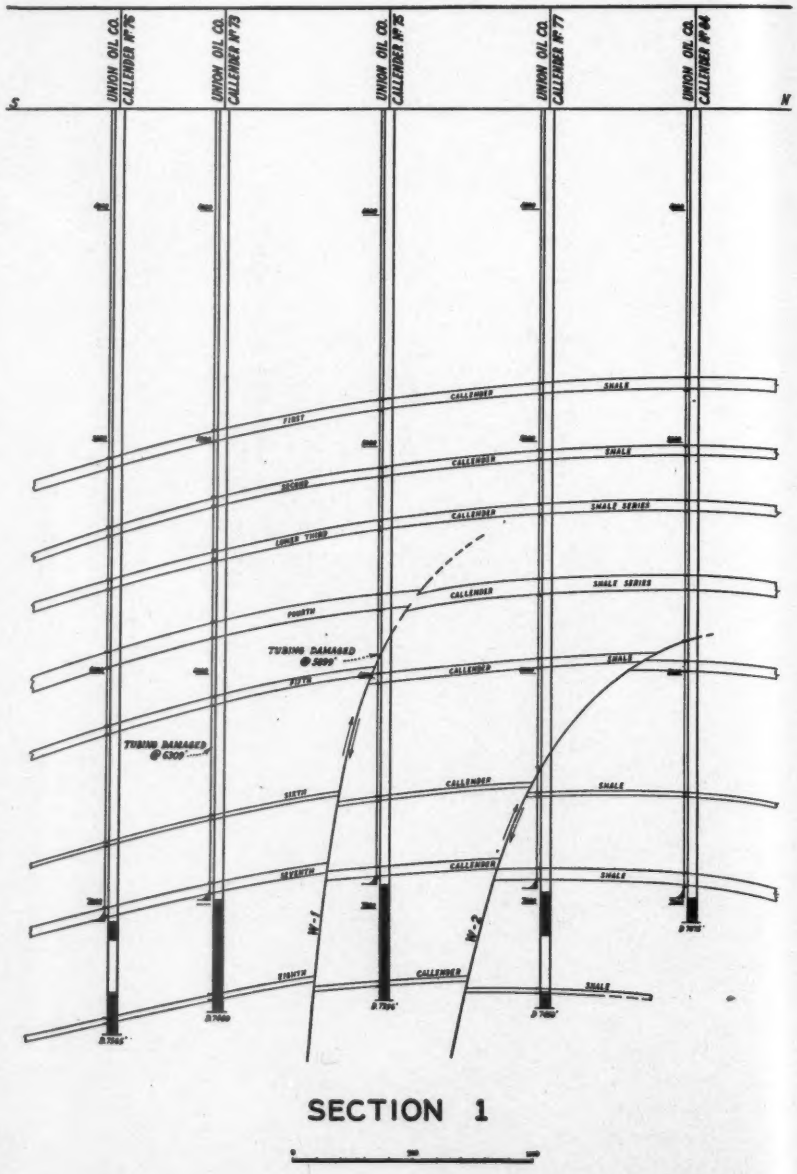
Of the damaged wells, repair work has been started on Union Oil Company of California's Callender 72, 73, 78, and 80 and R. E. Havenstrite's Larronde No. 4. In each case the initial step was to fill the hole with mud and attempt to establish circulation. In Union Oil Company of California's Callender 72, 73, and 78, and R. E. Havenstrite's Larronde No. 4, it was found that the casing was sufficiently damaged to allow the entry of salt water.

The second step was an attempt to remove the tubing from the well. In only one case, Callender No. 72, was the tubing found to be sheared. In the other wells the tubing could not be worked loose and it was necessary to cut and pull it from above the point of damage.

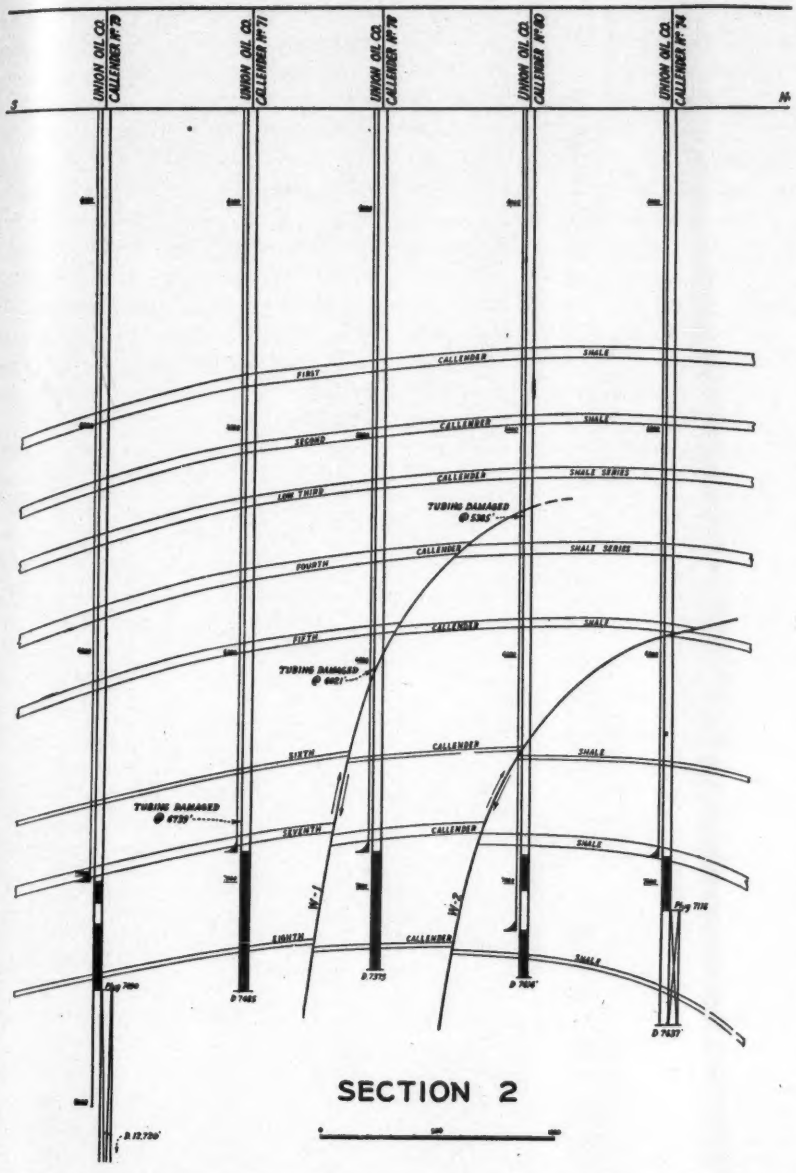
In Callender No. 72 the tubing was completely sheared at a depth of 5,320 feet. The break was sharp as shown in Figure 6. In this well the point of shear was at the intersection of the plane of the W-1 fault. Subsequent to the removal of the tubing, a 6⅛-inch Zublin bit was run inside of the 7-inch casing past the point of tubing shear, and 14 feet of hole was drilled without encountering any iron. This indicates that the lateral component of movement along the W-1 fault at this point was more than 7 inches.

As shown on the accompanying cross sections (Figs. 3, 4, and 5), it may be seen that the W-1 fault has a progressivly lower dip as it is traced upward in section and a diminishing amount of throw as it is traced westward along its strike. It is terminated on the east by the fault that forms the east boundary of the west block. It is therefore probable that the lateral component of movement along the W-1 fault was greater at the location of Callender No. 72 than in any other well. The angle of dip of the fault plane is so high at the point of intersection in the next line of wells on the south that the horizontal component of movement was probably relatively small. It is almost certain that had a well been drilled at the undrilled location north of Callender No. 56 it would have been badly damaged by the earthquake.

At the present time, Callender No.



SECTION 1



80 has been recompleted. In this well the remedial work consisted of recovering the 2½-inch tubing to 7,375 feet and the squeezing away of 97 sacks of cement under 2,300 pounds pressure with a cementing tool set at 5,340 feet. The 5½-inch casing was then cut and pulled from 5,261 feet. A second cement plug of 100 sacks of cement mixed with 25 sacks of sand was then pumped in through drill pipe hung at 5,260 feet. The top of the cement was located at 5,090 feet and drilled out to 5,120 feet. A whipstock was set and the well directionally redrilled. The well was recompleted in approximately the same producing interval on December 17, 1941, with an initial production of 1,383 barrels daily of 30.4° A.P.I. gravity oil, 2.4 per cent cut, with a 56/64-inch bean, 220 pounds tubing pressure, 400-530 pounds casing pressure, and 2,158,000 cubic feet of gas. The initial production on the original completion, November 23, 1940, was 588 barrels daily, 30.4° A.P.I. gravity, 1.2 per cent cut, with a 36/64-inch bean, 370 pounds tubing pressure, 675 pounds of casing pressure and 673,000 cubic feet of gas.

Structural History of Dominguez Oil Field

In considering the damage caused by the earthquake, the points of primary interest are (1) the reason for the localization of the damage within a particular area and (2) the possibility of a recurrence of such an economically undesirable phenomenon. The answers appear to be related to the mode of origin and youthful age of the Dominguez structure.

Mode of Origin

The mode of origin of the fields of the Newport-Inglewood structural line has been discussed by Ferguson and Willis,[4] by Eaton,[5] [6] and more recently summarized and enlarged upon by Reed and Hollister.[7] These authors advance the hypothesis that the fields of the Newport-Inglewood line are on a series of **en echelon** anticlinal folds formed as the result of horizontal shearing movements between blocks of the underlying basement. Concerning this hypothesis, Reed and Hollister[8] state:

"If this hypothesis is adopted, the conclusion follows that the Newport-Inglewood anticline follows a basement boundary of the kind that has elsewhere been the locus of important movements during the Tertiary and perhaps longer. The surface anticline may thus be considered to overlie a basement fault. Pursuing the hypothesis farther, we may even infer the direction and degree of dip of this hypothetical fault. On these problems there are in fact, two types of evidence, both, of course, delightfully speculative. First, if the fault is correctly inferred to be a fracture along a boundary which is a southward continuation of the slate-granite boundary of the Santa Monica Mountains, it may be expected to dip in the same direction as that contact, which is southwest. Second,

[4] R. N. Ferguson and C. G. Willis, "Dynamics of Oil-Field Structure in Southern California," *Bull. Amer.Assoc. Petrol.Geol.*, Vol. 8, No. 5 (September-October, 1924), pp. 576-83.
[5] J. E. Eaton, "A Contribution to the Geology of Los Angeles Basin, California," *ibid.*, Vol. 10, No. 8 (August, 1926), pp. 753-67.
[6] ——, "Long Beach Earthquake of March 10, 1933," *ibid.*, Vol. 17, No. 6 (June, 1933), pp. 732-38.
[7] R. D. Reed and J. S. Hollister, *Structural Evolution of Southern California* (Ameri. Assoc. Petrol. Geol., 1936), pp. 112-35.
[8] R. D. Reed and J. S. Hollister, *op. cit.*, pp. 132-33.

the seismologic evidence suggests the same conclusion since, as previously noted, the epicenter of the Long Beach earthquake was determined as lying a short distance to the southwest of the surface manifestation of the structural belt. If the focus was at a depth of approximately ten miles, moreover, as is considered seismologically possible. the dip of the fault plane may be computed as approximately 75 degrees.

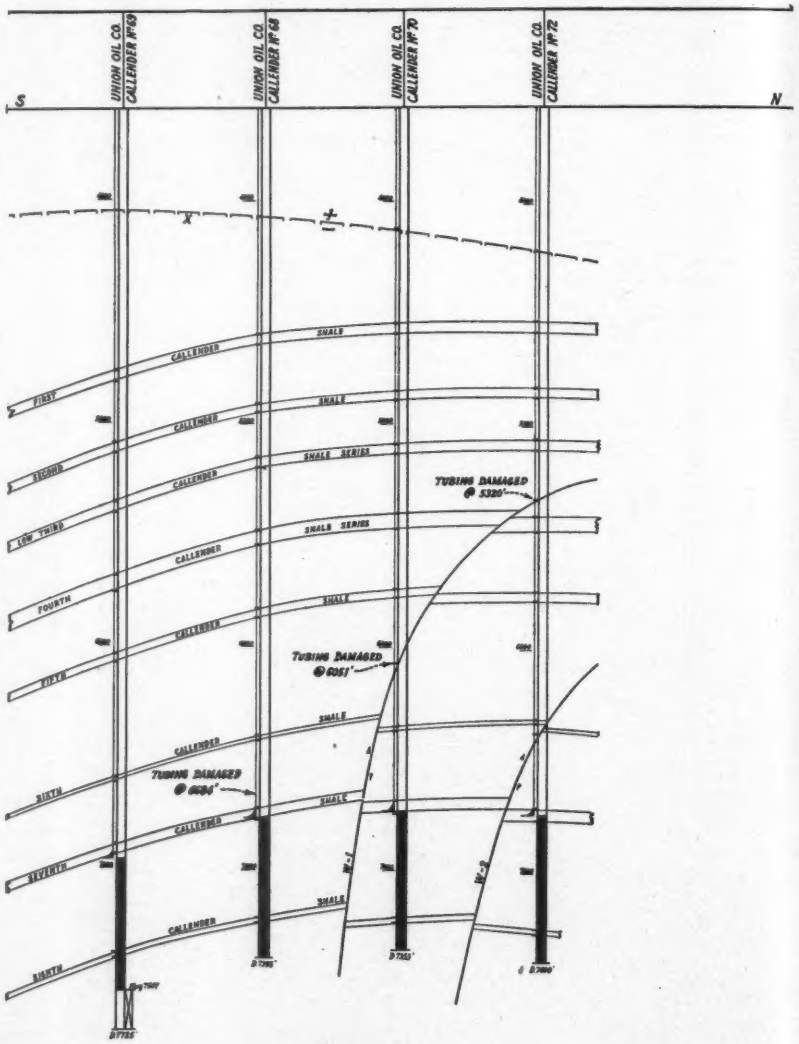
By way of summary, and of returning to earth from the speculative flight of the preceding paragraph, it may be said that in the blanket of Upper Miocene and later strata, the Newport-Inglewood structure is a domed, slightly faulted anticline; at a depth of several thousand feet it may be a granite-Franciscan contact that has been a locus of movement since the Middle Miocene and perhaps much longer. The more recent disturbances may have involved a slight shearing tendency which puckered the strata into small domes and fractured them with minor **en echelon** faults. The belt separates the western part of the Los Angeles Basin, which is topographically the El Segundo Plain and structurally a part of the Catalina uplift, from the eastern part, which is topographically the Downey Plain and structurally the landward apex of the Capistrano Tertiary embayment."

Since the foregoing was written, additional evidence has been obtained tending to confirm this hypothesis concerning the mode of the formation of the Dominguez structure. First, a detailed study of the subsurface geology of the Dominguez field has yielded evidence to prove horizontal movement along the series of faults striking oblique to the axial trend of the structure. Second, the drilling of Union Oil Company of California's Callender No. 79 in the western part of the field in 1940-41 proved the existence of the Franciscan schist basement beneath the western part of the field. This well was drilled to a depth of 12,720 feet and encountered the top of the schist at 12,415 feet. This is of particular interest because it is the closest point to the Newport-Inglewood fault zone in this part of the basin under which the presence of the Franciscan basement has been proved.

Age of Dominguez Structure

The youthful topography of the Dominguez field has been discussed by Reed[9] as follows:

"The most striking feature of the Dominguez anticline is that its site is marked by a low rounded hill, elliptical in plan. With a slight amount of "restoration," especially where the east end has been cut away by the Los Angeles River, the topographic contours of the hill reflect in a slightly subdued manner the structural contours drawn on top of one of the oil sands. The arched surface of the hill is therefore considered to be a "tectonic" surface, and to have been warped upward by the forces that caused the fold. These forces have acted so recently that, unlike the surface at Kettleman Hills, the "Dominguez surface" has been little affected by erosion. According to all indications, the beds immediately underlying this surface are geologically very young.



SECTION 3

At Long Beach, fortunately, the conditions are such that the Dominguez surface can be accurately dated with respect to the geological column of southern California. In the Long Beach anticline, a few miles southeast of Dominguez Hill, the Dominguez surface is interrupted by two small hills (Signal Hill and another) which rise above it along the anticlinal axis. They are obviously unreduced remnants belonging to an earlier stage. Examination of the folded strata exposed in them reveals the presence of large numbers of marine fossils. These have been studied by several paleontologists all of whom agree that they are younger than the Lower San Pedro stage of the Pleistocene. They are in fact nearly identical with, but possibly slightly older than, the Upper San Pedro fauna commonly found in beds covering the youngest marine terraces along the southern California coast. This correlation dates the final arching of the Dominguez surface of post-Lower San Pedro and perhaps post-Upper San Pedro—very late Pleistocene if not younger.

Localization of Area of Damage

The foregoing evidence, together with the periodic occurrence of earthquakes along the Newport-Inglewood line, indicates that the Dominguez structure is still growing, probably as a result of continued lateral movement along the Newport-Inglewood line of shear. In this process of continued growth, areas of unrelieved stress are continually being formed. It thus appears that, previous to the earthquake of October 21, 1941, unrelieved stresses were present near the crest of the structure on the west block of the Dominguez field. These were relieved as a secondary effect of the earthquake whose epicenter was on the Newport-Inglewood fault zone several miles southeast. Because of the localization of the stresses, the relief and consequent damage to the wells were by movement along the W-1 fault and possible planes of incipient faulting lying south of the W-1 fault.

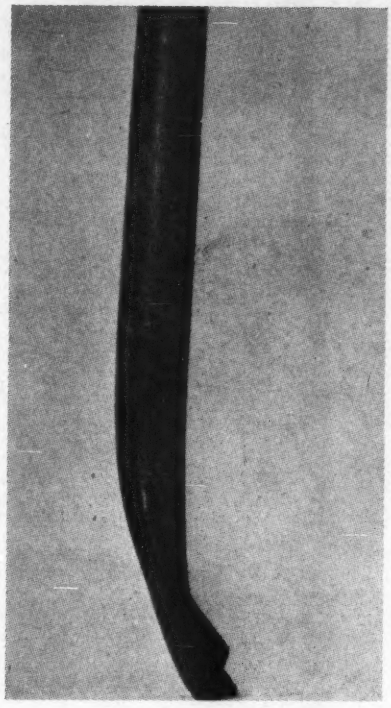


Fig. 6.—Photograph of completely sheared 2.5-inch tubing recovered from Union Oil Company of California's Callender well No. 72.

Possibility of Further Damage

The possibility of further damage to wells in this area within their producing life is particularly important from an economic standpoint. If it is accepted that the destruction was the result of a sudden release of stresses that had been gradually built up by the continued growth of the structure, it seems improbable that there will be a recurrence within the productive life of the wells. The fact that the more recent and slightly more intense earthquake of November 14, 1941, the epicenter of which was approximately 4 miles south of the one of October 21[10], did not cause any recognizable damage corroborates this hypothesis. It thus appears that at the present time the stresses have been relieved and, therefore, the possibility of further damage by earthquakes of moderate intensity is remote.

[9] R. D. Reed, *Geology of California* (Amer. Assoc. Petrol. Geol., 1933), p. 47.

[10] Beno Gutenberg, written communication, November 28, 1941.

K. L. Reynolds Heads Nat. Gasoline in Dist. 5

Appointment of Kenyon L. Reynolds, of Pasadena, Calif., as chief of the natural gas and natural gasoline section for District 5, has been announced by Deputy Petroleum Coordinator Ralph K. Davies.

Announced at the same time was the appointment of Robert W. Ducker, of Tulsa, Okla., as a natural gas analyst in the natural gas and natural gasoline section.

Mr. Reynolds will be stationed in the District 5 office in Los Angeles. Reed W. Garman is assistant chief of the section. Mr. Ducker will be stationed in Washington, D. C.

Mr. Reynolds' duty will be to coordinate production of natural gas and natural gasoline with the production of crude petroleum, so that a maximum of essential products will be available for war industries.

Well-known in the natural gasoline field on the Pacific Coast, Mr. Reynolds has been associated with that branch of the industry since 1915. During his career, he has designed, constructed, and operated compressor plants, pipelines, gathering systems, gas traps, refrigeration plants, oil absorption plants, and charcoal absorption plants.

He received his Bachelor of Science degree in civil engineering from the University of California and later served the Wallace Refineries, of California, as chief chemist, superintendent, assistant general manager, and vice president and general manager.

In 1922, Mr. Reynolds went to the Pacific Gasoline Co. of California, as assistant general manager. Later he became vice president and general manager in charge of 28 natural gasoline plants operated by the company. He left the organization in 1926 and since has been independently active in the industry.

Gordon Greene Leaves On Eastern-Mid.-Co. Trip

Gordon Greene of Robinson Orifice Fitting Co. has just left for a trip east. He will return by way of Tulsa where he will meet Jack Delaney, manager of Reliance Regulator Corp., to attend the meetings of the AGA (American Gas Association).

Ellington Associates Plan Commanche Point Try

Southeast of the Edison field and north of the Grapevine area L. E. Ellington & Associates plan to drill well No. 1 in sec. 31,12n-18w on Tejon Rancho property.

THIS

LAUGH

OFF!!

Tom Taggart keeps in tune with the season with this contribution:

An Australian who spent the last winter, a particularly rainy one, in England, was asked what he thought of the country. He looked out of the window at the barrage balloons tugging at their cables in the dripping sky, and replied, "Why don't they just cut the ropes on those things and let the place sink?"

Oilman **John Woodward,** exponent of victory gardens and poultry yards for the duration, got a chuckle out of this one:

A young woman brought a yapping dog into a hotel dining room. A man at a nearby table endured it for a while, then turned to her and with a grave air of solicitude asked "Your first dog, madam."

Carl Gates tells this one:

A floor-walker, tired of his job, gave it up and joined the police force. Several months later a friend asked him how he liked being a policeman. "Well," he replied," the pay and the hours are good, but what I like best of all is that the customer is always wrong."

For no good reason at all, **George Roth** recalled this one:

"You'd better lock me up. I've hit my wife on the head with a hammer," the agitated roustie told the cop.

"Have you killed her?" intoned the guardian of the law.

"I don't think so," replied the roustie. "That's why I want you to lock me up."

Wonder what reminded **Sherman McFedries** of this one:

The crushed driller had been lingering between life and death for several days.

"I think he's recovering consciousness doctor," the nurse reported. "He's just tried to blow the foam off his medicine."

Fran Minshall saw this sign on a truck:

"This truck stops for all railroad crossings, blonds and brunettes, and will back up one-half mile for a redhead."

Out of the clouds comes **Jack Swain** with this one:

"Mama, tell me how father got to know you."

"One day I fell into the river, and your father jumped in and saved me."

"Well, that's funny; he won't let me learn how to swim."

And this, strangely enough, reminds us of **Went Mann's** story:

Sonny: "Say, dad, what does argument pro and con mean?"

Dad: "Well, my boy, pro is your convincing and unanswerable statement, while the con is the contemptible dribble of the other fellow."

While we're at it we may as well produce **Ray Humphrey's** bit of natural history:

"An old lady kept a parrot which was always swearing. She put up with this on week days, but on Sunday she kept a cover over the cage, removing it on Monday mornings. One Monday afternoon she saw her minister coming toward the house, so she again placed the cover over the cage. As the reverend gentleman was about to step into the parlor, the parrot remarked: "This has been a damn short week."

"How's Collins?"

"Flat on his back."

"Why, only last night I saw him dancing with a blonde."

"So did his wife."

Names used on this page are entirely fictitious, and any resemblance to persons either living or dead is purely coincidental.

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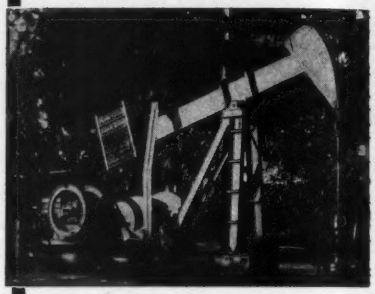

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Field Development

Los Angeles Basin

Continental and Lytle Drill at Turnbull Canyon

Moving 1500 ft. north from the field's two producing wells, Continental Oil Co. is drilling Turnbull Community No. 3 in Turnbull Canyon. The work is being done under contract by J. M. Jackson, Inc., of Long Beach who is using butane powered equipment in a standard derrick.

On the Whittier side of the hills, Robert S. Lytle, Operator, is drilling his wildcat well on property of Central Oil Co. in sec. 15, 2s-11w. Both wells are still at relatively shallow depths.

Barnsdall & Seaboard To Drill Reservoir Test

Barnsdall Oil Co. and Seaboard Oil Co. are laying plans for a joint test well to be drilled in sec. 30, 3n-15w near the Los Angeles municipal water reservoir west of San Fernando. According to the present schedule, Barnsdall Oil Co. will move equipment from its Rancho San Francisco property at Newhall-Potrero to do the drilling.

Shell Oil Co. Mission No. 2-1, sec. 25, 3n-16w, stopped drilling at 6978 ft. and plugged to 2141 ft. where a series of production tests is being made. A 5½ in. combination string including 900 ft. perforated on bottom was landed and cemented through perforations at 1220 ft. Tubing was hung at 2008 ft. Early reports indicated, however, that swab recovery was mostly mud and water with only traces of oil and gas.

Tide Water Associated Oil Co. Sesnon No. 1, most westerly well active in the San Fernando area, is drilling and coring below 6500 ft. with formation reported as siltstone.

The Texas Co. Starts New Buena Park Well

The Texas Co. is preparing to drill its next well in the Buena Park-Anaheim area on Queyrel property near the center of sec. 6, 4s-10w which is about half a mile southeast from Spencer No. 1 along the north side of the main highway. The well will be known as Buena Park Unit No. 1.

Universal Abandons Aliso Canyon Test

Universal Consolidated Oil Co.'s Ward No. 1, north edge deep test of Aliso Canyon, is being abandoned after a final test of the interval 8730 to 8850 ft. Fluid was swabbed to 7800 ft. and showed little rise leading to the decision to abandon.

When spudded in January of 1939, by Standard Oil Co., Ward No. 1 looked like a sure shot for production in the 5000 ft. discovery zone of the Aliso Canyon field but com-

LOS ANGELES BASIN WILDCATS

Area	Well	No.	Section	Depth	Status
Castaic	Mangold & Morse, McDermott	1	26, 5-17	4315	Idle
	Young, Roy, W., Inc., Walker	1	11, 4-16	8775	Drilling
La Mirada	The Texas Co., McNally	A-2	15, 3-11	5186	Drilling
Newhall	Airline Oil Co., Perkins	1	11, 3-16	2610	Idle
Repetto Hills	Bayshore Oil Co., Cramer	1	30, 1-12		Location
Palos Verdes	Surety Holding Co.	1	22, 5-14	1480	Idle
Puente Hills	Axis Pet. Co., Tandberg	1	13, 2-11	4189	Idle
	Continental Oil Co., Turnbull	3	13, 2-11	89	Drilling
	Lytle, Robt. S., Opr., Central	1	15, 2-11	376	Drilling
Rio Hondo	Potrero Oil Co., Newman	1	32, 1-11	5430	Circulating
San Fernando	Barnsdall Oil Co., T.I.T.	1	30, 3-15		Location
	Fernando Oils, Ltd., Chatsworth	1	18, 2-16		Rig
	Shell Oil Co., Mission	2-1	25, 3-16	6978	Testing
	Tide Water Assoc., Mission	1	26, 3-16	9291	Abandoned
	Tide Water Assoc., Sesnon	1	28, 3-16	6464	Testing
Whittier-La Habra	Los Nietos Valley Oil Co., Woodard	1	29, 2-11	50	Idle
	Orange County				
Anaheim	The Texas Co., Buena Park	1	6, 4-10		Grading
Bolsa Chica	La Bolsa Ro. Synd., Crane	1	22, 5-11	7041	Drilling
Costa Mesa	Thompson, Milton N., Banning	1	9, 6-10	5649	Bailing
Cypress	Midfield Pet. Co., Cypress	1	16, 4-11		Location
Kraemer	South Basin Oil Co., Well	103	24, 3-9	4105	Drilling
	San Bernardino County				
Carbon Canyon	Stella, E. F., McDermont	2	5, 3-8		Location

plex faulting cut off the upper sands. After standing idle at 6909 ft. for two and a half years, the project was taken over and deepened by Universal Consolidated in search of the deep Porter No. 12 zone. At 7450 ft., a hard sandstone showing oil was entered and it was believed that success was at hand. On a production test with the hole open to 7665 ft., however, only a light flow of gas was obtained, and the hole was deepened to 9361 ft. topping another possible zone at 8733 ft. which also proved too tight to produce.

La Bolsa Rancho Deepens Huntington Beach Wildcat

After testing wet in three intervals from 6510 to 6750 ft., La Bolsa Rancho Oil Syndicate's Crane No. 1 is being deepened near the 7050 ft. level. The project is located at the northeast corner of Springdale and Wintersburg Roads a mile north of the westerly limit of present Huntington Beach production.

South Basin Wildcat Cores Hard Brown Shale

South Basin Oil Co.'s No. 103, wildcat well located in sec. 24,3s-9w east of Richfield, has encountered an unexpected thickening of the hard brown Kraemer Shale and was last reported drilling in that formation at 4125 ft. Production is sought in the Kraemer Sands which are productive in the nearby Richfield field.

Western Gulf Completes Oak Canyon Outpost Well

Extending production at Oak Canyon a quarter of a mile to the southeast, Western Gulf Oil Co. completed L. W. Gilmour-U.S. No. 1 flowing 254 bbls. a day of 35 gravity clean oil and 164,000 cu. ft. of gas through a 12/64 in. bean. Casing was cemented on bottom at 7480 ft. and gun perforated from 7200 to 7288 ft. The Gilmour project is the highest on structure of any well yet drilled at Oak Canyon indicating that productive limits are not yet in sight in a south easterly direction. At present Western Gulf Oil Co.'s Lechler No. 2, Geo. R. Wickham No. 1 and L.W. Gilmour-U.S. No. 1 have successfully been completed in the deep zone while Western Gulf's Lechler No. 3 on the northwest and Hathaway Co.'s Ram No. 2 on the southwest have been failures.

Roy Young, Inc.'s Walker No. 1, north of Saugus in sec. 11,4n-16w, is drilling in shale with occasional sand streaks at 8800 ft.

The Texas Co. McNally No. A-2, said to be a joint project with Wilshire Annex Oil Co. and Universal Consolidated Oil Co., is spot coring below 5250 ft. The well is located near La Mirada between the Santa Fe Springs and West Coyote fields.

Potrero Oil Co.'s Newmann No. 1, located near the Rio Hondo wash north of the east end of Montebel-

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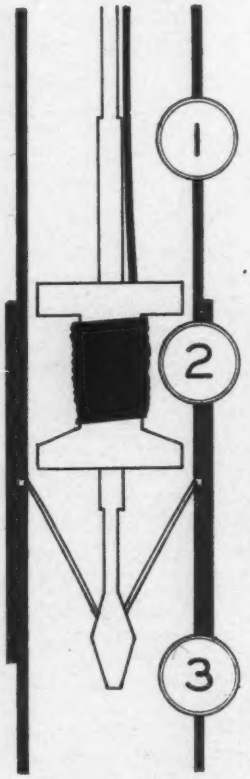

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lo, is standing idle at 5430 ft. waiting for casing to test showings reported near the 5000 ft. level.

Milton N. Thompson's Costa Mesa wildcat, Banning No. 1 is still trying to recover drill pipe lost while reaming after redrilling to 4330 ft.

E. F. Stella is preparing to drill another shallow wildcat on the McDermont lease in sec. 5,3s-8w near Carbon Canyon.

Hathaway Co. Testing Santa Fe Springs Well

Hathaway Co. is bailing preparatory to completing Jalk No. 118 at Santa Fe Springs after bottoming at 4575 ft. and setting casing at 4350 ft.

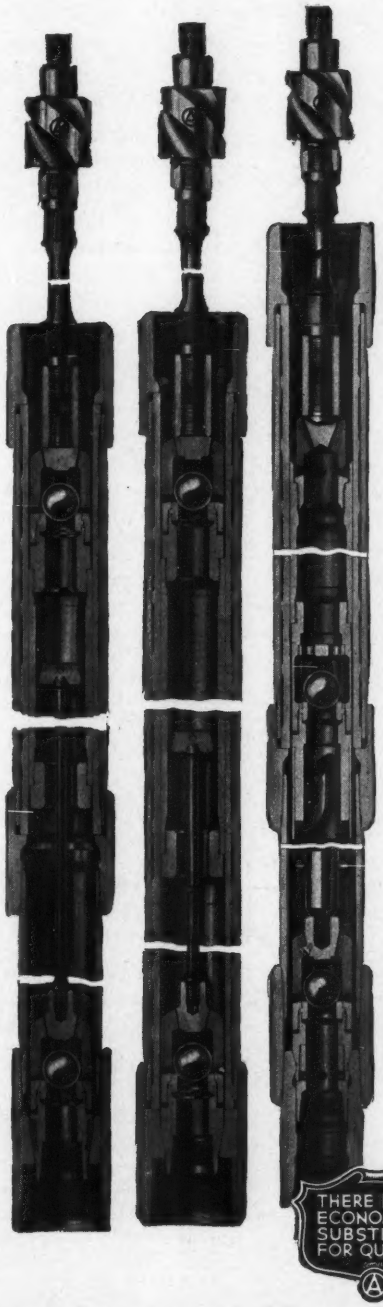
Vander Leck Re-elected Oil Producers Agency Head

Lawrence Vander Leck, president of Oil Producers Agency of California during the Agency fiscal year 1941-1942, was elected to a second term, ending in April, 1943, by the Agency Board of Directors in their Annual Meeting, April 15.

The Board also reelected Rush M. Blodget executive vice-president, a position he has held since the Agency was organized in 1930.

The Agency Board also elected two new vice-presidents, W. C. Whaley of the Barnsdall Oil Co., and H. E. Woodworth of the Safe Oil Co. L. A. Cranson of the Honolulu Oil Corp., and C. P. Watson of the Seaboard Oil Co., were reelected vice-presidents. W. A. Russell, Seaboard Oil Co., was reelected secretary-treasurer, and H. S. Briscoe, Franco-Western Oil Co., was elected assistant secretary-treasurer.

The following directors were also elected to fill vacancies caused by expiration of three-year terms: Angus J. Crites, Jack Feldman, Robert H. Garrison, James H. Lewis, Ralph B. Lloyd, Roy W. Young, Maurice A. Machris, John B. Sutherland, C. P. Watson, Chas. G. Wilson, and H. E. Woodworth. In addition to the newly-elected directors and officers, the complete Agency board includes: W. L. Adkisson, L. L. Aubert, H. A. Bardeen, Alphonzo E. Bell, J. J. Doyle, W. S. Fisher, Earl Fleisher, Wm. H. Geis, R. E. Havenstrite, Dana Hogan, C. A. Johnson, DeWitt Knox, Robt. S. Lytle, Cecil M. Rood, C. C. Spicer, Dwight G. Vedder, W. D. Waltman, Laurence I. Weill, and Lloyd Williamson.



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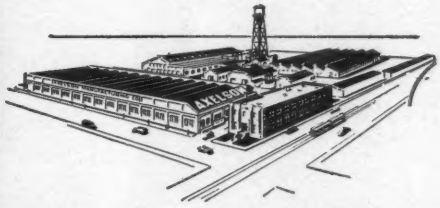

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San Joaquin Valley

Cantua Creek Try Now Below 6600 Ft.

Some four miles northeast of the Turk Anticline, in sec. 32,16-16, Richfield Oil Corp.'s McDonald Estate No. 1 was last reported drilling at 6655 ft. The well seeks the production indicated but never effected by the many earlier tests of the area. Nearest to achieving production was Western Gulf Oil Co.'s SPL. No. 3 in the southwest corner of sec. 3,17-15. This well, after bottoming in Eocene at 8531 ft., plugged to 6950 ft. and recovered a little 35.8 gravity oil from the Temblor zone topped at 6464 ft.

Amerada Finishes Riverdale Project

Bottomed at 7612 ft. and with 7 in. cemented at 6775 ft. Amerada Pet. Corp. plugged Jensen No., 54-26, Sec. 26, 17-19, to 6680 ft. and gun perforated opposite lower Miocene sands to complete flowing a 23 bbl. rate for 11 hours before shutting in. Brought in under wraps the well utilized only a 9/64 in. bean to make the 57.5 gravity production. Gas was measured during the flow at 611,000 cu. ft. and pressures were balanced at 2250 lbs.

Leal No. 34-26 in the same section was plugged from 6915 ft. to 6830 ft. where a formation test below the shoe of 5½ in. casing at 6820 ft. recovered 310 ft. of mud while 1675 ft. blew dry leaving 260 ft. of 35 gravity oil in the stem. At last report the operators were swabbing for a steady flow with fluid level at 6670 ft. Also in section 26 the company is rigging up to drill Lawton No. 58-26. Moving north Amerada has staked location for Zanolini No. 38-2 near the south quarter corner of sec. 23,17-19.

Richfield Quits Kerman Wildcat

The most northerly of Fresno county wildcats, Richfield Oil Corps. Ponte No. 1, was abandoned at 8797 ft. after penetrating the Cretaceous more than 4000 ft. Located in sec. 30,13-17, the well found only meagre showings in the Temblor at 3500 and 3700 ft. The Kreyenhagen was topped at 4430 ft., the Eocene at 4617 ft. and the Cretaceous at 4770 ft.

Grapevine Area Gets New Test

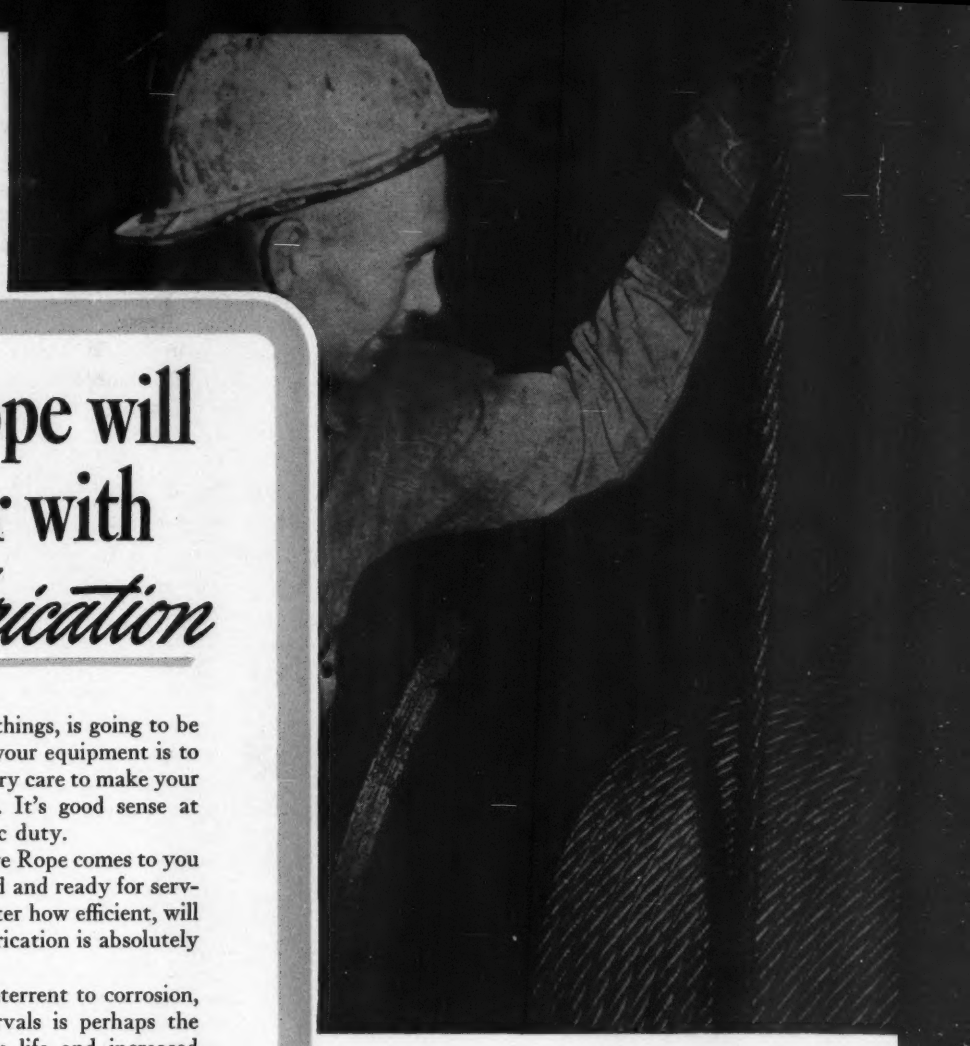
Richfield Oil Corp. is rigging up Tejon No. 3 near the west quarter corner of sec. 7,10n-19w, some two and a half miles south of the Wheeler Ridge Station on the west side of the Ridge Route. The company is persistently carrying on its avowed program of adequately examining the potentialities of its vast south Valley acreage.

The current try is the latest of a series of full size exploration holes whose geologic findings have been augmented by many coreholes on scattered portions of the multi-thousand acreage.

Immediate predecessor to the present project was KCL No. 3 on sec. 36, 11n-20w which was aban-

SAN JOAQUIN VALLEY WILDCATS

Area	Well	No.	Section	Depth	Status
	Fresno County				
Burrel	Richfield Oil Corp., Schultz	1	27, 16-18		Location
Cantua Creek	Richfield Oil Corp., McDonald	1	32, 16-16	6655	Drilling
Guijarral Hills	Lytle, Robt. S., Opr., Well	68-28F	28, 20-16	8420	Drilling
Helm	Amerada Pet. Co., Clover	75-28	28, 16-17	8110	Completed
	Amerada Pet. Corp., Truman	4-6	6, 17-18		Location
Jacalitos	Wilshire Annex Oil Co.	23-26E	26, 21-15	3787	Drilling
Kerman	Richfield Oil Corp., Ponte	1	30, 13-17	8797	Abandoned
Mendota	Jergins Oil Co., Cheney Ranch	3	30, 14-13	4003	Drilling
Raisin City	Shell Oil Co., Inc., S.A. & F.L.	33-19	19, 15-18	2508	Drilling
	Amerada Pet. Corp., Zanolini	38-23	23, 17-19		Location
Riverdale	Amerada Pet. Corp., Jensen	54-26	26, 17-19	7612	Completed
	Amerada Pet. Corp., Lawton	58-26	26, 17-19		Rigging up
	Amerada Pet. Corp., Leal	34-26	26, 17-19	6915	Swabbing
	General Pet. Corp., Comm. 8	45-21	21, 17-19	7944	Drilling
	Kern County				
Belridge	Shell Oil Co., Inc., Williams	45-6	6, 28-20		Rigging up
Buttonwillow	The Texas Co., Root	9-C	9, 29-24	4940	Completed
	The Texas Co., KCL	24-C	24, 29-24	4950	Abandoned
Comanche Point	Ellington, L. E. Assoc., Well	1	31, 12-18		Location
Devils Den	Continental Oil Co., Mabury	1	25, 26-18	1992	Suspended
Edison	Getty, J. Paul, Mattson	1	6, 30-29	4649	Drilling
	M.T.M. Associates Well	1	23, 30-30	150	Drilling
Grapevine	Richfield Oil Corp., KCL	3	36, 11-20	6291	Abandoned
Kern River	Seaboard Oil Corp., Fuhrman	1	28, 28-28	5256	Abandoned
Kettleman-So.	Bristol Oil Corp., Hellman	1	2, 25-19	2174	Idle
Mt. Poso	Alpha Oil Co., C. V. Elliott	1A	1, 27-28	1335	Drilling
	Delaney, Fred G., Well	1	12, 27-27		Location
	Signal Oil & Gas Co., Glide	23-1	22, 27-28	1496	Completing
Paloma	General Pet. Corp., Gallagher	61-33	33, 31-26	1814	Idle
	Western Gulf Oil Co., Symons	12-7	7, 32-27	11811	Completed
Richgrove	Bolling, R. S., Quinn	3	15, 25-27	2926	Idle
	Superior Oil Co., Well	1	26, 25-27	1680	Drilling
	The Termo Co., Parker	1	12, 25-27	1778	Abandoned
	The Termo Co., Salca	1	1, 25-27	150	Drilling
Shafter	Continental Oil Co., Neuman	1	36, 27-24	12857	Testing
	General Pet. Corp., S. P.	51-15	15, 28-24	14252	Abandoned
Shale Hills	Tideland Oil Co., Grant Est.	1	4, 27-18	4113	Reaming
	Kings County				
Pyramid Hills	Miesse, Richard S., Jackie	1	22, 24-17	75	Drilling
	Pac. O. & G. Dev., West Slope	2	20, 24-18		Location
	Tulare County				
Pixley	Continental Oil Co., Pixley Comm.	1	9, 23-25	7906	Abandoned
Terra Bella	Stout, Geo. W., Stout	2	11, 23-27	745	Idle
Trico	Trico Oil & Gas Co., Lee	1	17, 24-23		Rig
Tulare	Richfield O. Corp., N. Tulare Com.	1-1	33, 19-24	2330	Drilling



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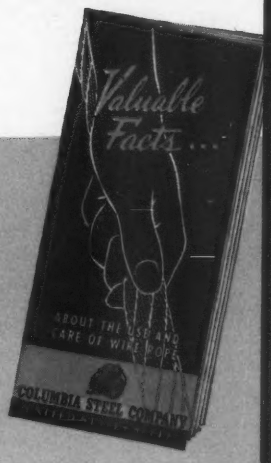


COLUMBIA STEEL COMPANY
San Francisco
AMERICAN STEEL & WIRE COMPANY
Cleveland, Chicago and New York
United States Steel Export Company, New York

UNITED STATES STEEL

doned at 6291 ft. in gray sand and shale after finding oil showings at 5000 ft. and a few oil stained sands at 5788 ft. A formation test of the interval 5010 to 5089 ft. recovered some gas cut mud and no oil.

Mendota Test Nears Objective

Jergins Oil Co.'s Cheney Ranch No. 3, sec. 30, 14-13 of the Mendota area, is drilling at 4003 ft. on its way to the objective Domengine sands in the Eocene epoch. The sands were found in Jergins' earlier drilling on the ranch near 4460 ft.

R. S. Miesse Drilling Sunflower Anticline

Richard S. Miesse is drilling Jackie No. 1 in the northwest quarter ofsec. 22,24-17 in Kings county. The operator is reported to have acquired leases totaling 1600 acres which are said to embrace the Sunflower anticline in its entirety. The properties surrounding the immediate activity were acquired from the Avenal Land & Oil Co., John Loosemore Ranch and J. E. Orchard Ranch.

The well, now reported in McLure shale at grassroot stages, will be the forerunner of 28 required by lease conditions in the event of a discovery.

Amerada Pet. Starts Southeast Helm Try

Four and a half miles southeast of the Helm producing area and a like distance west of the town of Burrel, Amerada Pet. Corp. is preparing to drill Truman No. 4-6 in search of another Fresno county discovery. Located near the west quarter corner of sec. 6,17-18 the well will be drilled under contract by Bell & Loffland.

In sec. 28, 16-17 of the Helm area, Amerada Pet. Corp. finished Clover No. 75-28 flowing 178 bbls. of 40 gravity oil and 3,557,000 cu. ft. of gas through a 14/64 in. bean from an effective depth of 8093 ft. Last production was reported as 30 bbl. daily rate 38.5 gravity cutting 0.8% Utilizing a 16/64 in. bean the well marked up 1300 lbs. flow pressure while making an estimated 875,000 cu. ft. of gas.

Edison Area Well Makes Poor Showing

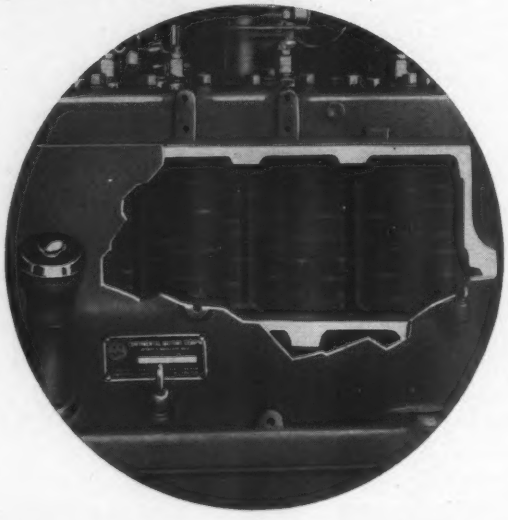
The J. Paul Getty Mattson No. 1 in sec. 6,30-29 near the Edison railway station, is coring gray sand and shells at 4649 ft. after coring only 11 ft. of fair oil sand in the Wicker zone below 4212 ft.

In the easterly Edison area, M. T. M. Associates spudded well No. 1 and was last reported drilling at 150 ft. near the west quarter corner of sec. 23,30-30.

Combine Starts Raisin City Well

Having received its certificate from the O.P.C. the Seaboard Oil Corp.-Tide Water Assoc.-Union Oil Co. combination spudded S. T. U. No. 86-13 on sec. 13,15-17 of the Raisin City field. The project is currently standing with 11 in. casing cemented on bottom at 710 ft.

Full Length Water Jacket!



The Continental full length water jacket with water completely surrounding each cylinder barrel, minimizes distortion. This permits closer fitting pistons resulting in less blow-by and lower oil consumption.

Other important features in Red Seal Continental Engines for oil field service are—directional cooling — packless, internally sealed, ball bearing water pump — interchangeable bearings — counterweighted crankshaft with precise balancing — pressure lubricated barrel-type tappets—and individual porting for quick starting, maximum power, economy and flexibility.

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A. E. Bell Corp. Works Cat Canyon Project

Alphonzo E. Bell Corp.'s Gilmore No. 1, sec. 23,9n-33w. in the Cat Canyon field, is being swabbed on alternate days to induce formation channeling in the hope of increasing the 50 bbl. recovery of 14 gravity oil cutting 10% fresh water which results from the operation. Fluid stands at an average 4400 ft.

The Bell interests are awaiting a WPB permit before proceeding on Lompoc No. 6 in sec. 28,8n-34w, roads to which location have already been graded.

Standard Rigging Orcutt Wildcat

Standard Oil Co. is rigging up to drill Rice Ranch No. 1 in sec. 14,-9n-34w of the Orcutt area. With more than 2000 acres under lease between the current site and the Santa Maria field the company is reported planning an intensive search for a new heavy oil accumulation in the lower Sisquoc and the Monterey Chert zones.

Bottom Reached In Bardsdale Try

Ventura Southern Oil Co. McCampbell No. G-1 in sec. 19,3n-19w is bottomed in hard shell at 4179 ft. after finding the top of the Sespe at approximately 4160 ft. At last report operators were running an electric log to determine the advisability of setting casing for production trials at 3200 and 3900 ft. where promise was reportedly shown during drilling.

Ojai Deep Test Recovers Fish

Richfield Oil Corp.'s Ojai No. 44, deep test in sec. 13,4n-22w, freed drill pipe stuck on bottom near 7700 ft. and is currently drilling in hard brown shale at 7843 ft.

In sec. 7, 4n-22w Spencer D. Coates' Pirie No. 5 is making hole in hard tight sand at the 525 ft. level.

Alliance to Complete Deep Avenue Project

Alliance Petroleum Co. is preparing to complete Hisey No. 5 at Ventura Avenue as soon as a reamer can be recovered from 8850 ft. Bottomed at 10,500 ft., the well is said to be stratigraphically deeper than any yet drilled in the field. Hisey No. 5 is located in the central Avenue section of the field.

Lloyd Corp. is deepening its long idle No. 1 well at 8650 ft. and is attempting to recover the fish from No. 2 which blew in nearly three years ago while circulating oil to loosen stuck drill pipe.

Most recent completion at Ventura was Tide Water Associated Oil Co.'s Lloyd No. 82 which was brought in from 5280 ft. flowing 250 bbls. a day on gas lift. Shell Oil Co. is drilling Taylor No. 154 at 5850 ft.

Tar Creek Trial Delayed By Rains

With the lease on sec.1,4n-20w inaccessible because of heavy rain run-offs, H. A. Ivers bailing test on Kentuck No. 13½ is temporarily delayed. An oil string containing perforations had been landed at 1433 ft. for the trial.

COASTAL COUNTIES WILDCATS

Area	Well	No.	Section	Depth	Status
	Santa Barbara County				
Cat Canyon	Alphonzo E. Bell Corp., Gilmore	1	23, 9-33	6457	Swabbing
Casmalia	Dolly Adams Oil Co., Morganti	2	13, 9-35	1670	Idle
Lompoc	Alphonzo E. Bell Corp., Lompoc	6	28, 8-34		Graded roads
	Fickert Oil Co., Ltd., Well	1	8, 7-33		Rig
Orcutt	Standard Oil Co., Rice Ranch	1	14, 9-34		Rigging up
	Ventura County				
Bardsdale	Hopland Oil Co., Well	1	1, 3-19	4634	Idle
	Santa Marino Oil Co., Elkins	1	7, 3-19		Grade
	Ventura Southern Oil Co.	G-1	19, 3-19	4179	Drilling
Conejo	Sycamore Oil Co., Boylan	1	23, 1-20	1700	Rigging up
Ojai	Coates, Spencer D., Pirie	5	7, 4-22	525	Drilling
	Kelalee Pet. Co., Harvey	1	8, 4-21		Rig
	Richfield Oil Corp., Ojai	44	13, 4-22	7843	Drilling
Oxnard	Signal Pet. Co., Well	1	36, 1-22		Location
Piru	Continental Oil Co., Holser	1	14, 4-18	2239	Drilling
	Delroy Pet. Corp., Fisk Core Hole	1	22, 5-18	1560	Drilling
	Pacific Western Oil Co., Temescal	11	4, 4-18	3120	Drilling
Sespe	Alford Drlg. & Expl. Co.	1	18, 4-19	2581	Idle
	Highland Drilling Co., Cosby	1	14, 4-19	1996	Idle
	Ivers, H. A., Kentuck	13½	1, 4-20	1433	Idle
	Volunteer Pet. Co., Tar Creek	3	28, 5-19		Location
	Volunteer Pet. Co., Phillips	2	29, 5-19		Location
Timber Canyon	Crude Oils, Inc., West	1	19, 4-20	958	Idle
	Denison, A. T., Denison	1	13 4-21	1470	Cleaning out
	Henderson-Ortez Oil Co., O'Leary	1	29, 4-20		Rig
Torrey Canyon	Union Oil Co., Torrey	60	5, 3-18		Location

NORTHERN COUNTIES WILDCATS

County	Well	No.	Section	Depth	Status
Colusa	Pacific National Pet. Corp.	1	17, 17n-4w	1400	Idle
Contra Costa	Tide Water Assoc., Bethel Is.	1	9, 2n-3e		Location
Madera	Blake, T. E., Chuck	1	28, 10s-17e		Rig
Merced	T.W.A.-Seaboard-Turlock Ld.	37-18	18, 6s-11e		Graded roads
Monterey	Loma Grande Oil Co., Corey	1	23, 24s-10e	4004	Idle
San Joaquin	Westates Pet. Corp., Spence	1	22, 1s-7e	5410	Abandoned
	Standard Oil Co., Blewett Comm.	3	23, 3s-6e		Rig
	Standard Oil Co., Suisun Comm.	2-1	25, 3n-1w		Location
Sonoma	Standard Oil Co., Petaluma	3-1	14, 5n-7w	1423	Abandoned
Stanislaus	Don Pedro Oil Co., Newman	1	9, 6s-9e	4074	Idle
Sutter	Buttes Oilfields, Inc., Buttes	8	28, 16n-2e	5560	Idle
Yuba	Wright, L. G., Cox	1	18, 14n-5e	1805	Idle

Petroleum Geologists Hold Annual Meeting

A joint annual meeting of The American Association of Petroleum Geologists, The Society of Economic Paleontologists, and The Society of Exploration Geophysicists will be held in Denver, Colo., at the Cosmopolitan Hotel on April 22, 23, and 24, 1942. These societies, which represent three branches of the exploration activities of the petroleum industry, are uniting their efforts to find new reserves of oil necessary to the needs of industry and the war effort. The Rocky Mountain Association of Petroleum Geologists is serving as host for the meetings, but all arrangements are under the direction of the executive committees of the three national organizations.

Ralph L. Carr, Governor of Colorado, will give the address of welcome at the opening meeting on Wednesday morning. Other speakers will include H. E. Christensen, president of the Rocky Mountain Association of Petroleum Geologists, Edgar W. Owen, president of the American Association of Petroleum Geologists, H. B. Peacock, president of the Society of Exploration Geophysicists, H. V. Howe, president of the Society of Economic Paleontologists and Mineralogists, Wallace Pratt, director and member of the Executive Committee, Stand-

Seated—left to right: C. E. Erdmann, vice president, Rocky Mountain Association of Petroleum Geologists; H. E. Christensen, president, Rocky Mountain Association of Petroleum Geologists; C. E. Dobbin, general chairman; F. M. Van Tuyl, Eastern Slope trips; A. E. Brainerd, Technical Program. Standing—left to right: W. A. Waldschmidt, Publicity; C. A. Heiland, Society of Exploration Geophysicists; C. M. Rath, Registration; W. O. Thompson, Educational Exhibits; C. S. Lavington, Hotels; H. W. Osborne, Entertainment; J. H. Johnson, Society of Economic Paleontologists and Mineralogists. Chairmen and officers not present: H. A. Stewart, Finance; J. W. Vanderwilt, Western Slope trips; T. S. Harrison, Reception; Don B. Gould, vice president, Rocky Mountain Association of Petroleum Geologists, and R. D. Copley, secretary-treasurer, Rocky Mountain Association of Petroleum Geologists.

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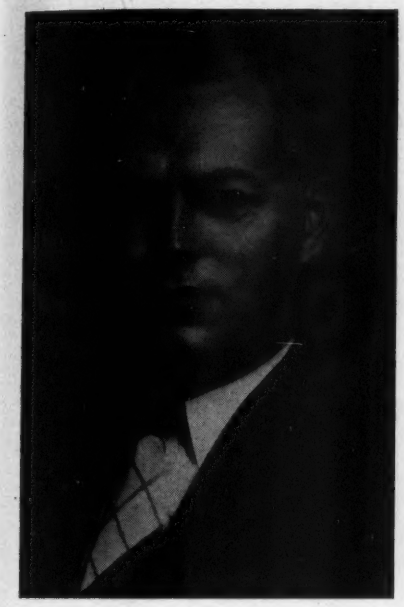
ard Oil Co. (New Jersey), Carey Croneis of the Walker Museum, University of Chicago, and E. L. DeGolyer, Director of Conservation, Office of Petroleum Co-ordinator.

P. L. Savage Appointed G. E. Engineer in L. A.

Of interest to the petroleum industry is the announcement recently made by the General Electric Co., that Phil Savage had been promoted to the office of Engineer of the Los Angeles Office.



P. L. Savage

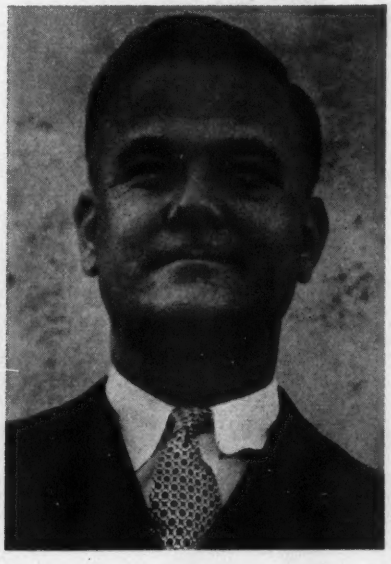
Up until 1941, Phil acted as oil field engineer in the Southern California district for General Electric. From 1941 until his present appointment he held the position of industrial engineer.

A graduate of the University of California in 1923, Mr. Savage went on test with General Electric in Schenectady until 1926. He then came to the Los Angeles office and did general engineering work until 1937, when he became oil field engineer.

F. C. Ripley On Leave For War Duration

Fred C. Ripley, Jr., has obtained a leave of absence from his present duties as manager of Export Sales for Emsco Derrick & Equipment Co., Los Angeles, for the duration of the war.

In making formal announcement of this move, Hugh Glen, president of Emsco, states it is Mr. Ripley's desire to become more closely and actively affiliated with the actual war effort during the present national emergency than his present duties permit; and while the company is extensively engaged in war work in its manufacturing divisions, present export and shipping conditions have not provided him with that opportunity.



F. C. Ripley, Jr.

E. B. Fowks

"Rip" is one of the best known export men in the oil industry, having been export manager for Emsco over a period of five years, and has made a number of trips to various foreign countries during that time for the company and its distributor, Continental Emsco Company. He is a charter member of the Los Angeles Chapter of Nomads, and has been active in the affairs of that organization since its inception.

Mr. Ripley and his wife both are ardent yachting enthusiasts, and his talents being decidedly along nautical lines, he very likely will proffer his services to the Naval branch of our Government forces where he feels he can serve most effectively. His associates of long standing at Emsco wish him every success in whatever duties may be assigned to him, and for more than one good reason, a speedy return to his present activities.

E. B. "Ernie" Fowks, present manager of Patents, Sales Promotion and Advertising has been appointed manager of Export Sales for Emsco Derrick and Equipment Co. during Mr. Ripley's absence in war service. He will relinquish his duties in connection with Advertising and Sales Promotion but will retain the management of Patents.

R. O. Perry

Having previously served in this same capacity for the company, and because of his long years of experience in various departments of the Emsco organization, Mr. Fowks is exceptionally well qualified to take over this work. Through numerous business trips to other countries during past years, he enjoys a wide acquaintance among oil men throughout all foreign fields, as well as in the United States where he has been affiliated with the petroleum industry for many years.

Mr. Fowks also is a charter member of the Los Angeles Chapter of Nomads, having occupied various executive offices, including that of President during 1941; and at present is a member of the Board of Regents of the National Association.

R. O. Perry has been appointed manager of Advertising and Sales Promotion for all divisions of the company including the D&B Division. Ray Perry has been with the D&B Division of Emsco Derrick & Equipment Co. for the past seven years and has been connected with

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the oil industry for many years.

It is interesting to note that the three men here mentioned, in keeping with Emsco's long adopted policy, come from "Oil" families. The fathers of all three of these men are pioneers in the oil business and all are very well known by the fraternity.

Humphrey Heads General Committee

Wm. F. Humphrey, president of Tide Water Associated Oil Co. has been appointed chairman of the General Committee for District No. 5, taking the position of A. L. Weil, who has resigned after serving since the original appointments to industry advisory committees were made by Petroleum Coordinator Ickes last July.

The General District Committee consists of the chairmen of the respective district functional committees for production, marketing, refining, natural gas and natural gasoline, and transportation. These committees are made up of men active in the oil industry and act in an advisory capacity to the Office of Petroleum Coordinator.

The general district committee itself is a coordinating group for the district functional committees. In addition to his new position as committee chairman, Mr. Humphrey will continue to serve as a member of the Petroleum Industry War Council, which advises the Office of Petroleum Coordinator on national matters affecting the oil industry.

Guijarral Hills Try Withholds Formation

Robert S. Lytle, combining with Seaboard and Honolulu Oil Corps. to drill No.68-28F southeast of the Coalinga Eocene Pool, has been able to keep exact geologic information solely in the possession of participating parties.

Located in sec. 28,20-16 the well proposes to try the Vaqueros and Eocene horizons for production comparable to that found in the new Coalinga areas or in the Kettleman North Dome field only a few miles farther southeast.

At last report the well was reaming to straighten hole with bottom at 8420 ft. Nothing is known of the formation at bottom but reliable reports place the McClure shale marker in the upper Miocene near 5715 ft. and the Temblor section at 6730 ft.

Oil Men's Calendar

Calif. Natural Gasoline Association. Los Angeles Chapter—Meets 1st Thursday Each Month, Barker Bros. Bldg., Los Angeles—Dinner at 6:00 (Optional). Taft Chapter—Meets Third Thursday Each Month.

American Society of Mechanical Engineers—Los Angeles Section—Meets 2nd Thursday Each Month—Barker Bros. Bldg., Los Angeles. Dinner at 6:30 (Optional).